



Final Regulation Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) citation	9VAC25-32-10 et seq. Primary Action 9VAC25-31-10 et seq. Secondary Action 9VAC25-20-10 et seq. Secondary Action
Regulation title	Virginia Pollution Abatement Permit Regulation (Primary); Virginia Pollutant Discharge Elimination System Permit Regulation; Fees for Permits and Certificates
Action title	Amendment of Regulations Pertaining to Biosolids After Transfer from the Virginia Department of Health
Date this document prepared	October 3, 2011

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 14 (2010) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

Please provide a brief summary (no more than 2 short paragraphs) of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation. Also, please include a brief description of changes to the regulation from publication of the proposed regulation to the final regulation.

The regulatory amendments comprise the requirements for land application of biosolids. The regulations establish, among other things, requirements for landowner agreements, public notice, signage, monitoring, reporting, payment of fees and financial responsibility. Since publication of the proposed amendments, numerous revisions have been made to the regulations. Significant changes can be found in the regulation concerning setback distances, notifications prior to land application, signage, environmental setback distances, slope restrictions, sampling and analysis, nutrient management requirements, staging and storage.

When the Biosolids Use Regulations (12VAC5-585) were transferred from the State Board of Health to the State Water Control Board in a final exempt action on September 25, 2007, the pertinent sections of the Biosolids Use Regulations were incorporated into the Fee, VPDES and VPA regulations. Only non-substantive changes were made at that time in order to accommodate a transfer in administration only. The current regulatory action was proposed to address further changes needed following the transfer.

A Notice of Intended Regulatory Action (NOIRA) was published in the Virginia Register of Regulations on June 23, 2008. DEQ utilized the participatory approach by forming an ad hoc technical advisory committee (TAC) that held nine (9) public noticed meetings (October 3, 2008; November 3, 2008; January 9, 2009; February 13, 2009; March 20, 2009; April 24, 2009; May 22, 2009; August 20, 2009; and September 22, 2009); in addition, a financial assurance subcommittee held two (2) meetings on March 11, 2009 and April 21, 2009.

Based on the input of the TAC, DEQ prepared proposed amendments to the regulations. On December 14, 2009, the Board voted to proceed to public comment and hearing on these proposals. Following Board approval, the Department of Planning and Budget completed an economic impact review on February 19, 2010. The Secretary of Natural Resources granted approval of the proposed regulatory amendments on June 22, 2010, and the Governor approved the amendments on January 14, 2011.

DEQ published the proposed amendments in the Virginia Register on February 28, 2011. A 60 day public comment period followed, ending on April 29, 2011. During the comment period, DEQ hosted four (4) public hearings (Lynchburg on March 31, Henrico on April 5, Bridgewater on April 7, and Bealeton on April 12). Messrs. Shelton Miles and Robert Dunn served as hearing officers.

DEQ received 181 written comments and at the 4 public hearings, 107 oral statements. DEQ staff sorted those comments and extracted individual topics addressed by each commenter, resulting in over 1,100 individual comments. The predominant subject addressed in the comments was buffers (setback distances) from homes, property lines, surface waters and other features. Numerous comments were also received on public notice, sampling and testing, general support and opposition of land application, nutrient management, storage, landowner agreements, and health, among others. While the comments overall were generally split between opposition to and support of biosolids land application, the speakers at the public hearings were predominantly farmers in support of the practice and opposed to more stringent regulation.

In response to public comment, DEQ made additional changes to the proposed amendments. Although not required under public involvement procedures in the Administrative Process Act, DEQ reconvened the TAC after the proposed changes. All original TAC members were invited, although the three citizen members who resigned from the original TAC declined to participate. This TAC meeting was held on June 24, 2011. In response to TAC comments, DEQ made additional changes to the proposed regulation.

The Attorney General's office also reviewed the regulation and suggested other changes which DEQ incorporated into the regulation.

Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency or board taking the action, and (3) the title of the regulation.

At the September 22, 2011 meeting of the State Water Control Board, DEQ staff requested the Board to accept the proposed amendments of regulations pertaining to biosolids as final regulations. The regulatory action included:

- 1) the Fees for Permits and Certificates (Fee) Regulation (9VAC25-20-10 et seq.)
- 2) the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation (9VAC25-31-10 et seq.), and
- 3) the Virginia Pollution Abatement (VPA) Permit Regulation (9 VAC 25-32-10 et seq.)

The Board approved the proposed amendments as final, with two additional modifications requested by the Board: 1) adding a requirement for a physician's note when an extended setback from an occupied dwelling or property line is requested; and 2) requiring that notification signs posted at land application sites not be removed for 30 days after land application concludes at permitted sites.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter numbers, if applicable, and (2) promulgating entity, i.e., agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

The legal basis for the Fees for Permits and Certificates regulation (9 VAC 25-20-10 et seq.), the Virginia Pollutant Discharge Elimination System Permit Regulation (9 VAC 25-31-10 et seq.) and the Virginia Pollution Abatement Permit Regulation (9 VAC 25-32-10 et seq.) is the State Water Control Law (Chapter 3.1 of Title 62.1 of the Code of Virginia). Virginia Code § 62.1-44.15 authorizes the State Water Control Board to promulgate regulations necessary to carry out its powers and duties. Specifically, §62.1-44.19:3 requires the State Water Control Board to include in regulation certain requirements pertaining to land application of sewage sludge.

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

On January 1, 2008 the Virginia Department of Environmental Quality (DEQ) assumed regulatory oversight of all land application of treated sewage sludge, commonly referred to as biosolids. This change in oversight of the Biosolids Use Regulations from the Virginia Department of Health (VDH) to DEQ was at the direction of the 2007 General Assembly, which voted to consolidate the regulatory programs so that all persons land applying biosolids would be subject to uniform requirements, and to take advantage of the existing compliance and enforcement structure at DEQ. In addition to directing that DEQ manage the biosolids program, the General Assembly also added additional requirements regarding biosolids permitting and management.

At its September 25, 2007 meeting, the Board voted to adopt as a "final exempt" regulatory action the transfer of the existing substantive content of the VDH Biosolids Use Regulations into the VPA, VPDES, Fee, and Sewage Collection and Treatment (9VAC25-790) regulations. Following this action, DEQ initiated the full regulatory process to address a number of issues. These included outstanding VDH regulatory actions, questions regarding public notice processes, processes to establish appropriate buffers to address health concerns, permit issuance and modification procedures, sampling requirements, nutrient management requirements, animal health issues associated with grazing, and financial assurance procedures.

Also, an expert panel was convened by the Secretary of Health and Human Resources and the Secretary of Natural Resources, pursuant to House Joint Resolution 694 of the 2007 Acts of Assembly, to explore the health and environmental implications of biosolids use. The final report of the panel was published on December 22, 2008 as House Document No. 27. This regulatory action also considered the Panel's report and recommendations.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

The following is a synopsis of the final DEQ modifications regarding selected topics which received a high degree of interest from the public.

Setback distances from homes and property lines

The topic most discussed by commenters was the buffer, or setback distance, from homes and property lines. In the proposed regulation, DEQ incorporated guidance established for setbacks from homes and property lines into the regulation. This guidance, developed in concert with VDH, established a procedure whereby the standard setback distance from an adjoining occupied dwelling home is 200 feet and 100 feet from a property line. An adjoining resident or landowner can request that the setbacks be doubled in distance to 400 feet from an occupied dwelling and 200 feet from a property line. This extension would be granted "upon request" by the owner or occupant, without a requirement to verify existence of any medical condition.

The primary focus of comments regarding residence and property line setbacks received from farmers, land appliers and wastewater treatment facilities stated that: 1) the length of the setbacks were not scientifically based; 2) the extended setback distance was only established for administrative convenience; 3) the setback procedure did not conform with the consensus of the TAC; 4) the additional setback request should be evaluated on the basis of the purpose of the request instead of being granted upon request; 5) the ability to request a setback extension on the same day as land application potentially presents a significant operational problem to land appliers and farmers; 6) the additional cost of fertilizing the area in the setback is potentially a hardship to farmers and could limit farm productivity; and 7) the increased distance could eliminate some smaller farms from being able to receive biosolids.

The primary focus of comments from citizens concerned about the use of biosolids stated that: 1) the length of the setbacks are not scientifically based; 2) there is no evidence the setback distances are protective of health, resulting in potentially not satisfying a statutory mandate; and 3) some selective studies have indicated odor from biosolids can travel approximately 1500 feet; thus, setbacks should be larger.

While the setback language in the regulation has been clarified, DEQ does not propose significant changes to the residence or property line setback distances. This is due to the fact that the distances and justification for extension to protect public health is based upon guidance from physicians at VDH with experience in evaluating biosolids setback extension requests. The distances proposed by VDH are based upon the science related to transmission of pathogens, with the addition of a safety factor intended

to provide an abundance of caution for those persons whose immune systems have been compromised by illness or other medical conditions.

In its 2008 Report to the Governor and the General Assembly (House Document No. 27), the Governor's Expert Panel on Biosolids stated the following:

In early discussions, the Panel agreed that addressing the questions surrounding citizen-reported health symptoms should be its highest priority. In the past 18 months, the Panel uncovered no evidence or literature verifying a causal link between biosolids and illness, recognizing current gaps in the science and knowledge surrounding this issue. These gaps could be reduced through highly controlled epidemiological studies relating to health effects of land applied biosolids, and additional efforts to reduce the limitations in quantifying all the chemical and biological constituents in biosolids. While the current scientific evidence does not establish a specific chemical or biological agent cause-effect link between citizen health complaints and the land application of biosolids, the Panel does recognize that some individuals residing in close proximity to biosolids land application sites have reported varied adverse health impacts.

Regarding odor and health impacts:

The Panel recognizes that odors from biosolids could potentially impact human health, well being and property values, but could not confirm such an impact or the extent of such an impact based on the current body of scientific literature and information presented directly to this Panel.

Historically, VDH responded to reports of adverse health impacts by doubling the setback distances from residences or property lines. VDH did this in conformance with state law and regulations in place at the time. DEQ's proposal to continue the practice of doubling the setback distances, albeit in a different administrative fashion, represents conformity with previous VDH practice and a regulatory precedent that was demonstrated by VDH to be protective of human health and thus met statutory requirements. Additionally, DEQ has proposed that odor control plans be required when biosolids are land applied in order to reduce the potential for odor to impact human health.

With respect to the administrative procedure proposed to grant setback extensions upon request, DEQ proposed this procedure based on TAC discussions. When the VDH representative on the TAC suggested all residence and publicly accessible property line buffers be extended based on the difficulty in ensuring all persons with certain medical conditions were identified, the TAC discussed options to address the time lag necessary to evaluate a newly identified health complaint. The concept of granting a standard buffer extension "upon request" rather than a time consuming and unpredictable evaluation process that potentially affects land application operations was generally agreed upon as a reasonable compromise.

During the September 22, 2011 Board meeting, after hearing the DEQ staff presentation and public comment, some Board members expressed concern that the language regarding extending setbacks upon request was not adequately reflective of the purpose of the extension and requested that the language be changed to require a doctor's note stating the extension is requested for medical reasons.

DEQ staff presented three alternatives: 1. the original language offering setback extensions upon request; 2. new language offering extended setbacks upon their request based on an existing medical condition and protection of their health; 3. new language offering extended setbacks upon request from their physician based on medical reasons, and further specifying that a note from the patient's physician must be submitted to DEQ.

The Board voted 5 to 1 in favor of the 3rd option, requiring a request from the citizen's doctor in writing on a form provided by DEQ.

With respect to a buffer extension request received after biosolids has been delivered to the field, DEQ responded to a recommendation from the reconvened TAC and included a limitation on the buffer extension request specifying that any such request must occur to DEQ at least 48 hours prior to the commencement of land application. The request must then be communicated to the permittee at least 24 hours prior to land application. DEQ may extend a setback distance within 48 hours of land application if requested by the Virginia Department of Health in connection with the landowner or resident's physician. DEQ will add this requirement as a permit special condition that establishes this procedure at the time of permit issuance.

To address concerns voiced regarding setbacks from schools, hospitals and other such facilities DEQ added a minimum setback requirement from these "odor sensitive receptors" (defined in the regulation) to be a minimum of 400 feet. The setback from publicly accessible property lines is proposed to be 200 feet. These setbacks are also based on guidance from VDH.

Concerns were expressed about the cost of fertilizing farmland, the inability to fertilize with biosolids in the setback areas and the need to substitute alternative fertilizers for these areas. While there is a benefit to the use of currently "free" fertilizer, the inability to use biosolids in setback areas is potentially offset by the reduced cost of fertilizer in the areas that do receive biosolids. Additionally, the establishment of a standard and predictable setback extension procedure benefits the farmer and land applier. In addition, some commenters expressed concern that some small fields may be ineligible for biosolids application due to setback distances. It is likely that some areas and farm configurations are not optimally situated to take full advantage of fertilization with biosolids.

Notification of land application

Significant comments were received from the public that notification prior to application needs to be clarified and improved. DEQ made additional changes in response to these comments. Effective notification procedures, particularly at the time of permitting, will facilitate the implementation of the setback extension procedures.

Section 62.1-44.19:3.K. of the Code of Virginia specifies that "at least 100 days prior to commencing land application of sewage sludge at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the chief executive officer or his designee for the local government where the site is located." The procedure for the 100 day notification prior to land application is clarified to be a one-time notification to the locality that may be accomplished when the permit application is received and DEQ notifies the locality of receipt of the permit application.

Section 62.1-44.19:3.K. of the Code of Virginia specifies that "the permit holder shall deliver or cause to be delivered written notification to the Department at least 14 days prior to commencing land application of sewage sludge at a permitted site." The regulatory requirements for this 14-day notification have been made identical to the statutory requirements. The list of other information required with the 14 day notice by the proposed regulation has been removed, as DEQ has found that in practice, permit holders do not have specific information about pending land application activities at this time. Alternatively, permit holders typically provide a significant amount of general information in order to satisfy the 14 day notice requirement, including a listing of all land application sites in a county, rather than only those where land application would definitely take place.

Because the land appliers will have more complete information nearer the time of land application, and in order to provide a more definitive notification process, DEQ has proposed that the permit holder provide written notification to DEQ and the locality when signs are placed 5 business days prior to land application. This notification will include specific identifying information for the subject sites, including that previously required in the 14 day notice.

DEQ also made changes to the proposed mandatory daily notice prior to land application. The daily notice requirement has been modified to occur no more than 24 hours prior to biosolids being delivered or

land application commencing at a permitted site. The notice can only include sites where land application will occur or biosolids will be delivered in the following 24 hours and must also include identification of the biosolids source.

Signage

DEQ received comments that signs identifying a land application site are often inadequately placed. DEQ modified the requirements to state that a sign must always be posted at or near the intersection of the public right of way and the main site access road or driveway to a land application site. If a field is located adjacent to a public right of way, signs shall also be posted along each public road frontage beside the field to be land applied.

Signs must be posted at least 5 business days prior to land application and remain at the site for at least 5 business days following land application.

Most land application sites are private property for which public accessibility is limited. For sites where circumstances of increased public accessibility exist, the regulations specify that alternative posting options can be required. This could include a special condition specifying additional post-application signage requirements to educate the public regarding the access restrictions.

During the September 22, 2011 State Water Control Board meeting, after hearing the DEQ staff presentation and public comment, the Board discussed the timing of the signage required at the land application sites. The board expressed concern that the signs should remain in place for 30 days following land application of biosolids due to the 30 day site restriction and requested that staff add a statement to 9VAC25-31-485.F.1. and 9VAC25-32-515.B.1 requiring that signs not be intentionally removed for at least 30 days after the land application was complete. Department staff presented the following statement which was incorporated into both sections identified above: *The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site.* Language was also added to require that the landowner agreement include a statement that the landowner agrees to not remove notification signs placed by the permit holder.

Environmental setback distances

DEQ received many comments voicing concern over the level of environmental protection for surface waters. The setback from surface waters has been modified to be consistent with the state and federal Concentrated Animal Feeding Operations (CAFO) regulations, whereby a 100 ft setback is required unless a 35 ft vegetated buffer is present. A definition for "vegetated buffer" has been added to both the VPA and VPDES regulations that is also consistent with the CAFO regulations. This requirement encourages the establishment of vegetated buffers adjacent to surface waters, which also promotes nutrient reduction goals established by the Chesapeake Bay Watershed Implementation Plan and other Total Maximum Daily Load (TMDL) implementation plans.

In response to comment regarding setbacks from other environmental features, DEQ increased the setback from open sinkholes to 100 ft (consistent with a well). A note has been added that specifies the 50 ft setback from a closed sinkhole can be reduced or waived by DEQ following evaluation by a professional soil scientist.

Other environmental setback language was revised for clarity based on comments related to the use of commonly used terms to identify surface water pathways. The provision for DEQ to increase any setback based on site-specific conditions remains.

Slope restrictions

DEQ received numerous comments that biosolids could effectively be used to help stabilize slopes in excess of 15%. In response, DEQ added a provision specifying that DEQ may waive the restriction on

land application of biosolids to slopes exceeding 15% if the biosolids are being used for the purposes of establishment and maintenance of perennial vegetation. Such a waiver may also be based on other site specific criteria and BMPs that offer adequate environmental protection.

Sampling and Analysis

Few changes to the regulatory requirements were proposed, primarily based on the lack of a scientific basis for the inclusion of additional parameters. The ability of DEQ to request analyses for additional parameters in soils or biosolids on a case-by-case basis has been clarified in order to account for situations that may warrant additional scrutiny. In effect, the ability to sample for additional parameters is a placeholder available to address new research being conducted by EPA, should those parameters be found to be of concern. [For biosolids sampling, refer to 9VAC25-31-540 and 9VAC25-32-356. For soil sampling, refer to 9VAC25-31-543 and 9VAC25-32-460.]

A requirement for PCB sampling at the time of initial permit application has also been added. [Refer to 9VAC25-31-100 and 9VAC25-32-60.]

Further, the existing sampling protocol for land applied biosolids was “recommended” but not mandatory. The proposed regulatory revisions clarifies that these protocols are required.

Significant comment was received expressing concern that the proposed regulations should require sampling and analysis of additional analytical parameters. Comment was also received that DEQ should remove any broad sampling and analysis requirements that included parameters not required by federal regulation, or that did not have specified regulatory limits.

In response to these comments, DEQ retained the regulatory provision that additional sampling and analysis may be required for site-specific or unusual circumstances, but did not add any additional analysis requirements. The regulation maintains broad site-specific authority to request additional information in cases where additional scrutiny is warranted. If evidence that elevated levels of a problematic constituent exist, sampling may be required by DEQ.

With respect to constituents found in the most recent EPA Targeted National Sewage Sludge Survey (TNSSS), EPA does not have information at this time indicating a necessity to restrict application rates or modify the current acceptable limits for land applied biosolids. EPA states that “the results presented in the TNSSS Technical Report do not imply that the concentrations for any analyte are of particular concern to EPA. EPA will use these results to assess potential exposure to these contaminants from sewage sludge.” Although presence of certain targeted analytes was detected, EPA states that “it is not appropriate to speculate on the significance of the results until a proper evaluation has been completed and reviewed.” DEQ will continue to monitor EPA technical surveys to determine if any program changes are appropriate for the Virginia biosolids program.

Molybdenum

The proposed regulation contained a land application limitation for biosolids with molybdenum (Mo) levels greater than 40 ppm. Such material was restricted from application on land used for grazing. EPA research has shown that biosolids with levels greater than this are at a higher risk to cause a copper (Cu) deficiency in grazing animals.

DEQ received comment that a lower ceiling limit for molybdenum was premature, as EPA has not yet changed the value in the federal regulation. DEQ has delayed action pending EPA adoption of a molybdenum standard.

DEQ retained the 75 ppm ceiling concentration for Mo, but replaced the 40 ppm restriction for biosolids applied to grazed lands with a footnote describing EPA’s research and the potential risk of application of

biosolids with Mo levels greater than 40 ppm. This information will be included in the fact sheet provided to the landowner.

Nutrient Management Requirements

DEQ received comments indicating that the standards for nutrient management were addressed in regulations promulgated by the Virginia Department of Conservation and Recreation (DCR), and were thus applied uniformly in nutrient management plans (NMPs) prepared by DCR certified planners.

In response to these comments, DEQ removed plant available nitrogen application rates and timing limitations for soybeans, tallgrass hay, warm season grasses and alfalfa in order to provide a uniform basis within the DCR nutrient management standards and criteria. Primarily, language from the DEQ regulations that was also found in DCR Nutrient Management Standards and Criteria has been removed, and a reference to those regulations inserted to maintain consistency. Certain practices pertaining to nutrient management that are unique to the way biosolids are managed have been added to the DEQ regulations, specifically a requirement to assure that pH and potassium levels in the soil are in appropriate ranges prior to biosolids land application.

The regulation also includes a requirement for NMP approval prior to land application where the soil test phosphorus level is above 35% saturation (135-162 ppm depending on regional differences).

Soil pH and Potassium

Comments were received requesting that specifications for application of lime and potassium be removed because DCR regulations specified recommendations for these nutrients. A number of comments were also received from farmers that the requirement to have soil pH and potassium concentrations at a minimum level prior to application was not practical. Establishment of newly cleared ground was given as an example.

DEQ retained the requirement for lime and potassium supplementation, as these practices are not related to nutrient rate or time of year, but rather to unique operational characteristics associated with permitted biosolids land application activity. However, DEQ did modify these requirements to specify that the land must be supplemented with the recommended agronomic rate of lime or potassium prior to or during biosolids land application.

Staging

Changes needed to be made to the field storage requirements to make the implementation more practical and address potential odor issues. A category newly defined as “staging” has been introduced to address the short term placement of biosolids on any field that is ready to be land applied. Staging may be used as a standard operational procedure or to address inclement weather or equipment breakdowns to stockpile only the biosolids that will be applied to that field or a permitted adjacent field. [Refer to Section 9VAC25-32-545.]

DEQ received comments that the proposed requirements for staging of biosolids at a site prior to land application were unclear. Staging has been defined as “the placement of biosolids on a permitted land application field, within the land application area, in preparation for commencing land application or during an ongoing application, at the field or an adjacent permitted field.” Staging is not defined as storage. Comments were also received that the time period whereby biosolids could be delivered to a site and not immediately land applied was too long.

DEQ modified the proposed regulation to clarify that the “staging period” was to be no longer than 7 days, and the biosolids must be covered if conditions do not allow land application by the 7th day. DEQ also added a requirement specifying that biosolids shall not be staged within 400 feet of an occupied dwelling and 200 feet of a property line unless waived through written consent of the occupant and landowner.

Storage

Changes were also made to requirements for on-farm storage of biosolids for less than 45 days for sites that would not be regulated by local conditional use permits. Provisions for “on-site storage” have been added to address storage up to 45 days on an engineered impermeable surface to serve all sites under control of the operator of the farm where the site is located. All biosolids must be removed by the 45th day after the first day of storage. If malodors related to the stored biosolids are verified by DEQ at any occupied dwelling on surrounding property, the problem must be corrected within 48 hours. If the problem is not corrected within 48 hours, the biosolids must be removed from the storage site. [Refer to Section 9VAC25-32-550.]

Existing requirements for “routine”, or long-term storage, were modified to include requirements for an engineered surface and covers to prevent dewatered biosolids from contacting precipitation. [Refer to Section 9VAC25-32-550.]

In response to comments, DEQ also clarified that on-site storage requirements only apply to sites not located at a wastewater treatment plant. Additionally, biosolids stored at a permit holder’s site may be land applied to any permitted site, not just those permitted by the holder of the permit for the on-site storage facility.

The proposed regulations specify that facilities designed to store dewatered biosolids must be covered. The reconvened TAC had questioned whether or not these proposed requirements would apply to existing structures, or only those constructed after the effective date of the permit. In response, DEQ added a clarifying statement that all on-site and routine storage facilities must meet the requirements specified in the regulation within 12 months of the effective date of the final regulation. DEQ also clarified that existing facilities designed to hold liquid or dewatered biosolids (and thus designed to hold runoff) could continue to be used to store dewatered biosolids, within permitted parameters.

Landowner Agreements

Public concern regarding landowners’ knowledge of biosolids applications to their property was evident in a number of comments. In response, DEQ added a requirement specifying that the most recently approved version of the landowner agreement form must be used for each permit application submitted, and that the form clearly identify the land application sites for which permission is being granted. In addition, a requirement has also been added that the landowner acknowledge receipt of a biosolids fact sheet approved by DEQ.

Some commenters expressed concern about education of those persons purchasing land on which biosolids had been applied, and suggested that DEQ require that notification be established in the deed to the property. State Water Control Law does not specify that DEQ has the authority to require deed notifications or restrictions. DEQ added requirements that the permit holder obtain a landowner agreement that requires the existing landowner to convey any applicable site restrictions related to land applied biosolids to the new landowner.

New language was added after the comment period to address updating landowner agreements following permit modification to incorporate the changes to the regulations. Within 60 days of the effective date of the modified permit, the permit holder will be required to notify landowners by certified mail that a new landowner agreement must be submitted prior to application of biosolids on the landowner’s property.

Financial Assurance

Persons holding or applying for permits to land apply biosolids are required to provide written evidence of financial responsibility, which shall be available to pay for cleanup costs, personal injury and property damage related to transportation, storage or land application of biosolids. The amended regulations

require a minimum of \$2 million in liability coverage, and allow various means to meet the financial test, including the corporate financial test, the local government financial test, letter of credit for liability coverage or trust fund for liability coverage. The proposal recognizes that a municipality will likely need to use different means to meet the financial assurance requirements than a private contractor. [Refer to 9VAC25-32-770 through 850.]

DEQ received public comment regarding the adequacy of the verification of financial assurance. A statement has been added clarifying that for financial assurance demonstrated through liability insurance, a pollution policy as well as a general liability policy is required that covers storage, transport, and land application of biosolids. Additionally, a measure of the financial stability of the insurance carrier is required in that the carrier must meet specified AM Best, Standard & Poor, or Moody ratings.

Comments were also received requesting that local government entities land applying biosolids under a VPDES permit be exempt from the requirements to demonstrate financial assurance. The Code of Virginia explicitly mandates that all permit holders authorized to land apply biosolids must demonstrate financial assurance, and the procedures prescribed in the regulation are consistent with other Department programs.

Public Notice Processes and Permit Modification Procedures:

The VPDES and VPA regulations were reviewed for requirements concerning public notice during the initial issuance and during permit modifications so that all requirements are consistent. In addition, the public notice process was examined to ensure that adequate provisions are in place to notify neighbors potentially affected by biosolids land application. Modifications have been made to clarify new statutory requirements, including public notice and public informational meetings upon receipt of an application for a new permit or a reissuance that will add greater than 50% of the acreage included in the original permit. Also, language was added to clarify that a request to add greater than 50% of the acreage included in the original permit is a major modification.

The statute requires a public meeting and opportunity to request a hearing when the addition of acreage is greater than 50% of the acreage in the original permit, but adjacent resident notification only for additions of less than 50% of the acreage in the original permit. The amended regulation specifies that DEQ will notify (or cause to be notified) adjacent residents whenever acreage is added to a permit, no matter what the percentage of the acreage addition. [Refer to 9VAC25-31-290 and 9VAC25-32-140.]

Permit application materials

DEQ received comments that land application sites were not properly identified in some past permit applications. In response to this concern, DEQ added a requirement for tax maps and associated tax parcel identification numbers, an aerial photograph of the proposed land application site, and a map identifying occupied dwellings and publicly accessible properties within 400 feet of the proposed land application site. These additional materials will help ensure all parcels are accurately identified in the permit application, as well as serving as a cross reference to landowner agreements which are required to include tax parcel identification numbers.

The requirement for additional soil characterization information for frequent applications of biosolids has been removed. Biosolids applications at greater than 50% of the agronomic rate more often than once every three years will require a DCR approved NMP, and the soils information will be evaluated in that process. Additionally, groundwater monitoring is not expected to be required for land application conducted in accordance with an NMP.

The requirement for a Land Application Plan (LAP) submittal at the time of permitting has been removed. All additions of land will necessarily be required to follow the notification procedures outlined in statute. Therefore, the information in the LAP is irrelevant at the time of permit application.

Permitting Procedures:

The proposed regulation addresses the concern over the possibility of land application sites being permitted for land application by multiple contractors in two ways: the land application agreement between the farmer and contractor must include certification that there are no concurrent landowner agreements with other companies, and the assignment of a unique control number to each field by DEQ to ensure clear tracking of land application sites. [Refer to 9VAC25-31-485 and 9VAC25-32-530.]

A final expiration date was added for all BUR permits of December 31, 2012. [Refer to 9VAC25-32-300.]

Fees

DEQ received comment that the fee structure proposed in the regulation for biosolids permits was not consistent with statutory requirements.

In response, DEQ adjusted the requirements to align as closely as possible with the statutory requirements in §§ [62.1-44.19:3.F.](#) and [62.1-44.15:6.](#) of the Code of Virginia. For VPDES permits, the initial permit fee will include an additional \$5000 for processing of the biosolids portion of the permit. Annual maintenance fees will not increase over that prescribed in [62.1-44.15:6.](#) Any addition of land will be subject to a \$1000 modification fee, whether added during the term of the permit or at reissuance. This includes additions of less than 50% of the originally permitted acreage.

For VPA permits, the initial permit fee remains at \$5000 for a 10 year term. Annual maintenance fees will be reduced to \$100 per year (\$1000 maximum reissuance fee prescribed in § [62.1-44.19:3.F.](#) divided by permit term of 10). Any addition of land will be subject to a \$1000 modification fee, whether added during the term of the permit or at reissuance. This includes additions of less than 50% of the originally permitted acreage.

Biosolids application tonnage fees have not changed from those prescribed in the proposed regulation. Land application of Class B biosolids will incur a fee of \$7.50 per dry ton and exceptional quality biosolids are exempt from a fee.

In regard to reimbursement to localities for local monitoring, language was added to the Fee regulation to clarify when local monitoring costs may be reimbursed above \$2.50 per dry ton, up to \$4.00 per dry ton biosolids applied in the county. The proposal requires prior approval from DEQ to exceed the \$2.50 reimbursement rate. Additionally, the reimbursement procedures were modified such that charges for monitoring not associated with determining compliance with state or federal law would be ineligible for reimbursement. [Refer to 9VAC25-20-149.]

Consistency between VPA and VPDES permit requirements:

There were several areas of inconsistency between biosolids land application requirements in the VPA and VPDES regulations. VPDES language regarding monitoring, recordkeeping, reporting, pathogen reduction and vector attraction reduction, which is based on the EPA 503 Rule, was added to the VPA regulation as new language or to replace existing language. Language was added to the VPDES regulation that refers to the requirements of the VPA Biosolids Use Standards and Practices. Language was added to each of the permit application sections to make VPA and VPDES permit application information consistent. [Refer to 9VAC25-31-100 and 9VAC25-32-60.]

The proposed requirements for permitting do retain an inconsistency related to the location of land application sites. The VPA regulation requires that a separate permit be obtained for each county or municipality where biosolids land application is proposed [Refer to 9VAC25-32-505.] Also, VPDES facilities retain the option of authorizing land application through their VPDES permit or by obtaining a separate VPA permit.

Exceptional Quality (EQ) Biosolids

DEQ received comment that distribution and marketing is not land application, and that it should follow that no NMP should be required for EQ material. The proposed requirement stated that biosolids meeting EQ standards may be distributed and marketed under a VPA or VPDES permit, and that nutrient management plans must be developed unless the EQ material: 1) is >90% solids (i.e. pelletized); or 2) is greater than 40% solids and has a C:N ratio greater than 25:1. DEQ also received comment that some biosolids compost and soil blends used for landscaping purposes would not meet the 25:1 C:N ratio and thus be subject to NMP requirements.

In response to these concerns, DEQ modified the NMP exemption for a blended product to include material that is not used for the purpose of fertilizing agricultural operations.

If bulk EQ biosolids are land applied as a cake, a NMP is required and the distribution and marketing permit may include additional restrictions.

Reclamation of mined and disturbed lands:

The Biosolids Expert Panel recommended that the TAC examine the regulations related to biosolids use in reclaiming mined and disturbed lands. The proposed regulations include a requirement that an NMP be required for all reclamation sites receiving biosolids, and that the plan be approved by DCR prior to permit issuance. [Refer to 9VAC25-32-560.]

Issues

Please identify the issues associated with the proposed regulatory action, including:

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;*
 - 2) the primary advantages and disadvantages to the agency or the Commonwealth; and*
 - 3) other pertinent matters of interest to the regulated community, government officials, and the public.*
- If there are no disadvantages to the public or the Commonwealth, please indicate.*

Land application setbacks

The revised procedures for extending setbacks from residences and property lines should add clarity that will benefit the Commonwealth as well as the general and regulated public by providing predictability as to the process that will be employed. However, the public will be disadvantaged by having to obtain a doctor's note in order to have a residence or property line setback extended.

The Commonwealth as well as the public will benefit from the additional environmental and health protection afforded by the additional setbacks for water supply reservoirs, streams and tributaries with public water supply designations. VPA and VPDES permit holders may be disadvantaged by the additional setbacks required.

Slope Restrictions

The farmers and the Commonwealth should benefit from allowing biosolids on slopes in excess of 15%, under specific conditions, due to increased stabilization of the slope and decreased erosion and soil loss.

Odor Control Plans

The requirements for odor control plans may be seen as an additional burden for some VPA and VPDES permit holders; however, some facilities have already implemented such plans. The public will benefit from the requirement for odor control plans through mandated procedures to abate malodor in biosolids.

Public Notice Processes and Permit Modification Procedures

VPA and VPDES permit holders will benefit from added clarity as to the requirements for public notice; however, they will experience a disadvantage in the time it takes to process a permit application when all adjacent residents must be notified in all cases. VPA and VPDES permit holders will be required to post additional signs at land application sites if the sites border more than one right-of-way.

The Commonwealth will incur additional costs due to the additional resources necessary to notify adjacent residents with all additions of land.

The Commonwealth as well as local government officials will benefit from the additional information provided in the notification procedures, and inspection scheduling should be improved.

Neighbors of land application sites should benefit from the additional notification and signage procedures. The changes to the signage requirements when biosolids are land applied require that the land applier post signs for a longer period of time. Neighbors of the land application sites should have an advantage in that they will have an extended period of notification.

Sampling Requirements

All parties should benefit from the increased clarity of the regulations. VPA and VPDES permit holders may be disadvantaged by the additional cost of PCB sampling at the time of permitting.

Animal Health Issues Associated with Grazing

Farmers will benefit from being made aware of potential animal health concerns regarding grazing of animals where biosolids with Mb content above 40 mg/kg have been applied, and making informed decisions.

Nutrient Management Requirements

All parties should benefit from the increased clarity of the regulations.

The VPA and VPDES permit holders may be disadvantaged if they must wait to apply biosolids at a site because nutrient supplements may need to be added. Farmers receiving biosolids may initially perceive a disadvantage if they must add lime or potassium to a land application site prior to receiving biosolids, but will benefit from the increased productivity afforded by appropriate nutrient management.

The Commonwealth will benefit from the availability of NMP information at the land application site, making the inspection process more efficient.

The public will benefit from increased assurance that nutrient management practices are being implemented properly at land application sites.

Reclamation of mined and disturbed lands

VPA and VPDES permit holders applying biosolids to mined or disturbed lands may be disadvantaged by the requirement to have a nutrient management plan pre-approved by DCR; however, all parties should benefit from successful land reclamation.

Staging and Storage

The new staging option may be used as a standard operational procedure or to address inclement weather or equipment breakdowns to stockpile only the biosolids that will be applied to that field or a permitted adjacent field. This option will allow greater flexibility for land appliers, as well as potentially reducing the need to site permanent storage facilities.

Provisions for odor abatement at on-site storage and routine storage sites will be an advantage to the public.

New requirements to cover routine storage facilities designed to store dewatered biosolids will reduce the potential for pollution of state waters as well as reducing the potential for odors.

Landowner Agreements

The Commonwealth will benefit from increased assurance that landowner agreements are properly signed by all legal landowners. The private landowners will benefit from receiving facts regarding the land application of biosolids on their property so that they can make an informed decision. The permit holder may be disadvantaged by having to obtain new landowner signatures with each permit reissuance.

Financial Assurance

VPA and VPDES permit holders will benefit from the increased clarity of the regulations; however, they may be at a disadvantage if they cannot meet the financial assurance requirements.

The public will benefit from increased assurance that financial resources would be available to pay for any losses that might be incurred due to biosolids land application.

Permitting Procedures

All parties will benefit from the increased clarity of the regulations.

Consistency between VPA and VPDES permit requirements

VPA and VPDES permit holders will benefit from the improvements in consistency as the requirements will be more straightforward for both parties.

The public will benefit from increased consistency in that the regulatory requirements for all neighboring land application activities will be the same.

DEQ permit writers and inspectors will benefit from all permittees land applying biosolids under the same requirements, eliminating any confusion between VPA and VPDES permits.

Fees

The Commonwealth will benefit from changes proposed to the regulatory fee structure in that they are believed more equitable with the agency resources necessary to process permits. New requirements for public meetings and adjacent property owner notification can add significant costs to the agency; therefore, the \$1,000 modification fee will be charged for every modification to add land. In turn, the maintenance fee has been reduced for VPA Permits. This will be advantageous to VPA Permit Holders that do not request frequent modification to permits.

New minor VPDES facilities that do not generate large amounts of biosolids will be disadvantaged by the increased permit issuance fee. The modification fee for the addition of land to a VPDES permit is less than the standard VPDES Permit modification fee, however, if a permit modification involves adding land and changes to the discharge requirements of the permit, both fees will apply.

Exceptional Quality (EQ) Biosolids

VPA and VPDES permit holders that market EQ biosolids that do not meet the exemption criteria for NMP requirements will be disadvantaged by the requirement to procure a NMP; however, the market for EQ biosolids should not be negatively affected by the regulatory proposal, benefitting the permit holders as well as the public.

VPA and VPDES permit holders should benefit from simplified recordkeeping requirements.

Local Monitoring Reimbursement

All parties should benefit from the increased clarity of the regulations.

Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar’s office, please put an asterisk next to any substantive changes.

Section number	Requirement at proposed stage	What has changed	Rationale for change
9VAC25-20-60 A 4	Permit Maintenance Fee Due Dates: for facilities that are authorized to land apply biosolids.	Add terminology to clarify requirements for all permitted biosolids activities: for facilities that are authorized to land apply, distribute or market biosolids...	To clarify that the distribution and marketing of biosolids are included in the requirements.
9VAC25-20-60 A 4	No permit will be automatically continued without payment of the required fee.	Make correction to terminology: No permit will be administratively continued without payment of the required fee.	Correction to terminology and to clarify requirements.
9VAC25-20-60 B	Surface Water Withdrawal (SWW) and Ground Water Withdrawal (GWW) permits.	The term Ground Water was revised to "groundwater".	To clarify requirements and to conform to common usage of terms.
9VAC25-20-110 A	VPDES Permit issuance fee for the authorization for land application of biosolids	Add terminology to clarify requirements for all permitted biosolids activities: fee for the authorization for land application, distribution or marketing of biosolids. 2 changes made - in table and footnote	To clarify that the distribution and marketing of biosolids are included in the requirements.
9VAC25-20-110 B	(Note: Land application rates listed in the table	Delete current language because it is not relevant to	Deletion of irrelevant language.

	below are facility "design" rates.)	VPA land application (VPDES only).	
9VAC25-20-110 B		VPA Permit issuance fee for VPA Combined Sludge Operation - the authorization for land application of industrial sludge (excluding water treatment residuals) and municipal biosolids. New category based on permitting requests and confusion on the fee form. When applying for a permit that covers 2 categories – the highest fee applies.\$7500	Addition of new category based on permitting requests and confusion of the fee form.
9VAC25-20-110 E	Ground Water Withdrawal (GWW) Permits issued in response to Chapter 25...	The term Ground Water was revised to "groundwater" in the section and associated fee schedule table.	To clarify requirements and to conform to common usage of terms.
9VAC25-20-120 A	Fee schedule for major modifications.	Section renumbered to 9VAC25-20-120.	Renumber to reflect loss of section B.
9VAC25-20-120 A	(Note: All flows listed in the table below are facility "design" flows.)	Section renumbered to 9VAC25-20-120. Reinserted original statement into VPDES specific section: Note: All flows listed in the table below are facility "design" flows. because it applies only to VPDES Permits	Renumber to reflect loss of section B. Reinserted original statement into VPDES specific section because it applies only to VPDES Permits.
9VAC25-20-120 A	VPDES major modification fee for the authorization for land application of biosolids	Section renumbered to reflect revised section numbering – 9VAC25-20-120 1. Language revised to include "distribution or marketing".	Add terminology to clarify requirements for all permitted biosolids activities: fee for the modification relating to the authorization for land application, distribution or marketing of biosolids. 2 changes made - in table and footnote.
9VAC25-20-120 A 1	Table footnote: VPDES major modification fee for the authorization for land application of biosolids; The modification fee shall	Footnote language revised: The modification fee shall apply for any addition of land application sites to a permit. Revision is based	To clarify requirements.

	apply for the addition of land application sites to a permit when a public meeting is required as specified in 9VAC25-31-290 I 2.	on elimination of maintenance fee and the cost of the department providing notification when adding any land.	
9VAC25-20-120 2		Footnote 1 designation added to VPA Industrial Sludge Operation fee.	Footnote designation added to clarify requirements.
9VAC25-20-120 2		New VPA permit category and footnote designation added – VPA Combined Sludge Operation. VPA Permit modification fee for the authorization for land application of industrial sludge (excluding water treatment residuals) and municipal biosolids. New category based on permitting requests and confusion on the fee form. When applying for modification of a permit that covers 2 categories – the highest fee applies \$3750.	New category added based on permitting requests and confusion on the fee form.
9VAC25-20-120 2	Footnote designation for VPA Permit Category – VPA Municipal Biosolids Operation.	Footnote designation revised to reflect the addition of a second footnote.	To clarify requirements.
9VAC25-20-120 2	Footnote * to VPA Permit table. Footnote read: "The modification fee shall apply for the addition of land application sites to a permit with a public meeting is required as specified in 9VAC25-32-140 C 2.	Footnote designation revised to reflect the addition of a second footnote. Footnote revised to read: "The modification fee shall apply for any addition of land application sites to a permit.	To clarify requirements.
9VAC25-20-120 2		Footnote 2 added: "When adding any industrial source (excluding water treatment plant residuals) to a permit that only authorizes the land application of municipal biosolids, the modification fee for a VPA combined sludge operation shall apply."	To clarify requirements.

9VAC25-20-120 5	Ground Water Withdrawal (GWW) Permits issued in response to Chapter 25...	The term Ground Water was revised to "groundwater" in the section and associated fee schedule table.	To clarify requirements and to conform to common usage of terms.
9VAC25-20-120 B	All rates listed in the tables provided in this section are facility "design" rates unless noted otherwise.	Section deleted.	Delete terminology, because it does not apply to all permit types, only VPDES.
9VAC25-20-142 A 2	Base fee rate for Virginia Pollution Abatement (VPA) permits. (Note: Land application rates listed in the table below are facility "design" rates.)	Note deleted.	Delete current language from this section because it is not a relevant to VPA land application, only VPDES.
9VAC25-20-142 A 2	Base fee rate for Virginia Pollution Abatement (VPA) permits – Permit Category VPA Municipal Biosolids Operation – Fee: \$500.	Fee revised to \$100.	Changed fee to \$100 to reflect one tenth of the maximum fee authorized for reissuance by statute, § 62.1-44.19:3.F.
9VAC25-20-142 A 3	3. The amount of the annual permit maintenance fee...where...	Capitalized "Where:"	Grammatical correction.
9VAC25-20-147 B	Records and Reports; Report and notification; submitted by the 15 th of the month following the month that land application occurs.	Revised and added language to clarify that report is due each month: submitted by the 15 th of each month for land application activity that occurred in the previous calendar month... If no land application occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred.	To clarify requirements.
9VAC25-20-149 C 1 g	"1. Form 1...All invoices are to include the following: g. List of expenses for which reimbursement is sought;"	Insert "and". Revised to read: "1. Form 1...All invoices are to include the following: g. List of expenses for which reimbursement is sought; <u>and</u> "	Grammatical correction.
9VAC25-31-10	Definitions: "Act" means Federal Water Pollution Control Act, also known as the Clean Water Act,	Add "CWA" to definition. Revise to read: Definitions: "Act" means Federal Water Pollution Control Act, also	Based on discussions with the AG's Office.

	as amended, 33 USC § 1251 et seq.	known as the Clean Water Act (CWA), as amended, 33 USC § 1251 et seq.	
9VAC25-31-10	Definitions: "Applicable standards and limitations" means all state, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the Clean Water Act (CWA) (33 USC § 1251 et seq.) and the law, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for biosolids use or sewage sludge disposal under §§ 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.	Revised to read: "Applicable standards and limitations" means all state, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the CWA (33 USC § 1251 et seq.) and the law, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under §§ 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.	Based on discussions with the AG's Office and to clarify requirements.
9VAC25-31-10	Definitions.	Added definition: "Biosolids" means a sewage sludge that has received an established treatment and is managed in a manner to meet the required pathogen control and vector attraction reduction, and contains concentrations of regulated pollutants below the ceiling limits established in 40 CFR Part 503 and 9VAC25-31-540, such that it meets the standards established for use of biosolids for land application, marketing, or distribution in accordance with this regulation. Liquid biosolids contains less than 15% dry residue by weight. Dewatered biosolids	Based on discussions with the AG's Office.

		contains 15% or more dry residue by weight."	
9VAC25-31-10	Definitions: "CWA" means the Clean Water Act (33 USC § 1251 et seq.) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95, 217, Public Law 95-576, Public Law 96-483, and Public Law 97-117.	Revised to add new reference to Public Law 100-4: Revised to read: "CWA" means the Clean Water Act (33 USC § 1251 et seq.) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95, 217, Public Law 95-576, Public Law 96-483, Public Law 97-117, and Public Law 100-4.	Revised to update Public Law references.
9VAC25-31-10	Definitions – "Land application area" means land under control of an AFO owner or operator that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied.	Revised definition to read: "Land application area" means, in regard to an AFO, land under control of an AFO owner...	Added "means in regard to AFO" because land application area is different when used in regard to biosolids. Based on comments received.
9VAC25-31-10	Definitions.	Added new definition: "Land application area" means, in regard to biosolids, the area in the permitted field, excluding the buffer zones, where biosolids may be applied."	Added definition to clarify requirements – Based on comments received.
9VAC25-31-10	Definitions.	Added definition: "Malodor" means an unusually strong or offensive odor associated with biosolids or sewage sludge as distinguished from odors normally associated with biosolids or sewage sludge.	Added to define term used in section. Based on discussions with AG's Office.
9VAC25-31-10	Definitions – "Publicly owned treatment works" or "POTW" means...	Definition deleted.	Definition was listed twice, deleted the definition that was between "Pollutant" and "POTW treatment Plant". Based on comments

			received.
9VAC25-31-10	Definitions.	Added new definition: "Setback area" means the area of land between the boundary of the land application area and adjacent features where biosolids or other managed pollutants may not be land applied.	Added to clarify changes made to buffers and buffer language in the regulation.
9VAC25-31-10	Definitions.	Added new definition: "Vegetated buffer" means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.	Added to clarify changes to buffers and buffer language in the regulation.
9VAC25-31-10	Definition: "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...	Revise definition to read: "Wetlands" means those areas that are inundated or saturated by surface or groundwater...	To clarify requirements and to conform to common usage of terms.
9VAC25-31-100 A	Application for a permit – Duty to apply...Deleted to sentence: The requirements for concentrated animal feeding operations are described in subdivisions C 1 and 3 of 9VAC25-31-130.	Reinserted language: "The requirements for concentrated animal feeding operations are described in subdivisions C 1 and 3 of 9VAC25-31-130."	Language needed to clarify requirements.
9VAC25-31-100 A 2	Applications for a permit – Duty to apply...All concentrated animal feeding operations have a duty to seek coverage under a VPDES permit.	Deleted language: "All concentrated animal feeding operations have a duty to seek coverage under a VPDES permit."	Language duplicative with reinsertion of language in 9VAC25-31-100 A.
9VAC25-31-100 H 7 c	"c. Every applicant must report quantitative data for	Add punctuation. Revise to read: "c. Every applicant	Grammatical and formatting correction.

	<p>every outfall for the following pollutants: <u>(1)</u> Biochemical oxygen demand (BOD) <u>(2)</u> Chemical oxygen demand <u>(3)</u> Total organic carbon <u>(4)</u> Total suspended solids <u>(5)</u> Ammonia (as N) <u>(6)</u> Temperature (both winter and summer) <u>(7)</u> pH</p>	<p>must report quantitative data for every outfall for the following pollutants: <u>(1)</u> Biochemical oxygen demand (BOD); <u>(2)</u> Chemical oxygen demand; <u>(3)</u> Total organic carbon; <u>(4)</u> Total suspended solids; <u>(5)</u> Ammonia (as N); <u>(6)</u> Temperature (both winter and summer); <u>and</u> <u>(7)</u> pH.</p>	
9VAC25-31-100 Q 7 d	<p>Requires that "Applicants must collect and analyze samples in accordance with analytical methods specified in 9VAC25-31-490 unless an alternative has been specified in an existing biosolids use permit. Samples for PCB analysis shall be collected and analyzed in accordance with EPA Method 1668 B."</p>	<p>Revised language to read: "d. Applicants must collect and analyze samples in accordance with methods specified in 9VAC25-31-490, 40 CFR Part 503 (March 26, 2007) and 40 CFR Part 136 (March 26, 2007)."</p>	<p>Revised language to clarify requirements and to provide specific approved method references.</p>
9VAC25-31-100 Q 8 d	<p>"d. If sewage sludge biosolids from the applicant's facility meets the ceiling concentrations in 9VAC25-31-540 B 1, the pollutant concentrations in 9VAC25-31-540 B 3..."</p>	<p>Insert the term "Table" twice in subdivision. Revise to read: "d. If sewage sludge biosolids from the applicant's facility meets the ceiling concentrations in 9VAC25-31-540 B [<u>Table</u>] 1, the pollutant concentrations in 9VAC25-31-540 B [<u>Table</u>] 3..."</p>	<p>Correct references to Tables.</p>
9VAC25-31-100 Q 9 c (1)	<p>c. The following information for each land application site that has been identified at the time of permit application. (1) The DEQ control number, if previously assigned, identifying the land application field or site and the site's location;</p>	<p>Revised language: "(1) The DEQ control number, if previously assigned, identifying the land application field or site. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location;"</p>	<p>Revised language to provide for use of a different site identification code if a DEQ control number has not been assigned. Based on comments received.</p>
9VAC25-31-100 Q 9 a		<p>Add new subdivision language for "9 a" that reads: "a. Written</p>	<p>New language added to clarify requirements. Based</p>

		permission of landowners on the most current form approved by the board."	on comments received.
9VAC25-31-100 Q 9 b	9VAC25-31-100 Q 9 a	Renumbered subdivision from "9 a" to "9 b".	Renumbered to account for addition of new language for subdivision.
9VAC25-31-100 Q 9 c	9VAC25-31-100 Q 9 b	Renumbered subdivision from "9 b" to "9 c".	Renumbered to account for addition of new language for subdivision.
9VAC25-31-100 Q 9 d	9VAC25-31-100 Q 9 c	Renumbered subdivision from "9 c" to "9 d".	Renumbered to account for addition of new language for subdivision.
9VAC25-31-100 Q 9 d (2)	Requires that information on the "The site's latitude and longitude to the nearest second and method of determination" be provided.	Revised language to require that information on "The site's latitude and longitude in decimal degrees to three decimal places, and method of determination" be provided.	Changed lat/long units to "in decimal degrees to three decimal places" in keeping with technology.
9VAC25-31-100 Q 9 d (3)	Requires that a legible topographic map of the proposed application areas to scale as needed to depict features be provided.	Revised language to read: "(3) A legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:"	Add requirement for "aerial photograph, including legend" in keeping with technology and to better identify sites and features, based on field experience.
9VAC25-31-100 Q 9 d (3) (g)	Required information: (g) Frequently flooded areas (National Resources Conservation Service (NRCS) designation; and...	"and" at end of subdivision deleted.	Editorial change to provide for the addition of new requirements.
9VAC25-31-100 Q 9 d (3) (h)	Required information: (h) The gross acreage of the fields where biosolids will be applied;	Inserted new requirement as (h): "Occupied dwellings within 400 feet of the property boundaries and all existing extended dwelling and property line setback distances;	Added new language to be consistent with new "setback language".
9VAC25-31-100 Q 9 d (3) (i)		Inserted new requirement: "(i) Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated setback distances; and	Added new language to be consistent with new "setback language".

9VAC25-31-100 Q 9 d (3) (j)	Originally included as item (h) "The gross acreage of the fields where biosolids will be applied;"	Numbering revised.	Numbering revised to reflect the addition of new requirements.
9VAC25-31-100 Q 9 d (5)	Information requirement: "(5) County tax maps for each farm to be included on the permit, which may include multiple fields;"	Information requirement revised to read: "(5) County tax maps labeled with Tax Parcel ID(s) for each farm to be included in the permit, which may include multiple fields, to depict properties within 400 feet of the field boundaries;"	Revised to clarify requirements and to be consistent with new "setback language".
9VAC25-31-100 Q 9 d (7)	Information requirement: "(7) The name, mailing address, and telephone number of the site owner, if different from the applicant;"	Requirement revised to read: "(7) The name, mailing address, and telephone number of each site owner, if different from the applicant;"	Clarified to include information for "each site owner" based on comment and SWCB concerns regarding identification of property owners and permit issuance.
9VAC25-31-100 Q 9 d	Additional site information required for permit applications proposing frequent application of biosolids.	Subdivision and associated requirements deleted.	Deleted language because land application rates and frequency will be dictated by NMP, agronomic rate annually will not be allowed by an NMP. Revisions made based on comment.
9VAC25-31-100 Q 9 e	" d-e . The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk sewage sludge biosolids subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the site:"	Insert the term "Table". Revise to read: " d-e . The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk sewage sludge biosolids subject to the cumulative pollutant loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 to the site:"	Revised to correct reference to Tables.
9VAC25-31-100 Q 9 e (1)	"(1) Whether the applicant has contacted the permitting authority in the state where the bulk sewage sludge biosolids subject to 9VAC25-31-	Insert the term "Table" twice in subdivision. Revise to read: "(1) Whether the applicant has contacted the permitting authority in the state where the bulk sewage	Revised to correct reference to Tables.

	540 B 2 will be applied, to ascertain whether the bulk sewage-sludge <u>biosolids</u> subject to 9VAC25-31-540 B 2 has been applied to the site on or since July 20, 1993..."	sludge-biosolids subject to 9VAC25-31-540 B [<u>Table</u>] 2 will be applied, to ascertain whether the bulk sewage-sludge <u>biosolids</u> subject to 9VAC25-31-540 B [<u>Table</u>] 2 has been applied to the site on or since July 20, 1993..."	
9VAC25-31-100 Q 9 e (2)	"(2) Identification of facilities other than the applicant's facility that have sent, or are sending, sewage-sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the site since July 20, 1993, if, based on the inquiry in subdivision 8-d <u>9 e</u> (1) of this subsection, bulk sewage-sludge <u>biosolids</u> subject to cumulative pollutant loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993."	Insert the term "Table" twice in the subdivision. Revise to read: "(2) Identification of facilities other than the applicant's facility that have sent, or are sending, sewage-sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 to the site since July 20, 1993, if, based on the inquiry in subdivision 8-d <u>9 e</u> (1) of this subsection, bulk sewage-sludge <u>biosolids</u> subject to cumulative pollutant loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 has been applied to the site since July 20, 1993."	Revised to correct reference to Tables.
9VAC25-31-100 Q 9 f	Requirement for information "if not all land application sites have been identified at the time of permit application, the applicant must submit a land application plan that, at a minimum:"	Subdivision and associated requirements deleted.	Deleted Land Application Plan language because notification requirements in statute supersede the addition of land with administrative approval.
9VAC25-31-100 Q 10 h	Requirements for biosolids storage facilities not located at the site of the wastewater treatment plant - "h. Ground Water monitoring plans including pertinent geohydrological data to justify upgradient and downgradient well location and depth."	Replaced phrase "ground water" with the term "groundwater". Revised language to read: "Groundwater monitoring plans for the facilities, if required by the department. The groundwater monitoring plan shall include pertinent geohydrological data to justify upgradient and downgradient well location	Because NMP is required, biosolids cannot be applied annually at full agronomic rate or higher, which would warrant ground water monitoring, added language to clarify information is required only if groundwater

		and depth."	monitoring plan is required.
9VAC25-31-100 Q 12	Requirement for: "A biosolids operations management plan shall be provided..."	Revised requirement to delete the term "operations". Language now reads: "12. A biosolids management plan shall be provided..."	Correct terminology.
9VAC25-31-100 Q 12 b	Requires that "a nutrient management plan approved by the Department of Conservation shall be required for application sites ..."	Revised language to read: "b. A nutrient management plan approved by the Department of Conservation and Recreation as required for application sites..."	To clarify requirements.
9VAC25-31-100 Q 12 b (2)	"(2) Sites where land application is proposed more frequently than once every three years at greater than 50% of the annual agronomic rate; and"	Deleted the word "and" at the end of the subdivision.	To account for the addition of a new requirement.
9VAC25-31-100 Q 12 b (3)	"(3) Mined land sites where land application is proposed at greater than agronomic rates."	Language revised to read: "(3) Mined [<u>or disturbed</u>] land sites where land application is proposed at greater than agronomic rates; [<u>or</u>] "	Revised to correct terminology and to clarify requirements.
9VAC25-31-100 Q 12 b (4)		Added new subdivision: "(4) Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters."	To be consistent with requirements in section 410, based on comments received.
9VAC25-31-100 Q 13 a	Biosolids transport – Description and specification on the bed or the tank vehicle.	Revised language to read: "a. General description of transport vehicles to be used;"	To clarify requirements – based on comments received.
9VAC25-31-100 Q 13 b	"b. Haul routes to be used from the biosolids generator to the storage unit and land application sites;	Delete text and replace with language from 13 c: "Procedures for biosolids offloading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning), field reclamation, and emergency spill notification and cleanup measures; and"	Based on comments received. Revised to clarify requirements.
9VAC25-31-100 Q 13 c	9VAC25-31-100 Q 13 d.	Renumbered from 9VAC25-31-100 Q 13 d to 13 c.	Renumbered to account for deletion

			of previous subdivision.
9VAC25-31-100 Q 14 a (1)	Field operations – storage- routine storage: "Routine storage – supernatant handling and disposal, biosolids handling..."	Revised language to read: "(1) Routine storage at facilities not located at the site of the wastewater treatment plant – supernatant handling and disposal, biosolids handling..."	Revised to say routine storage at facilities not located at the site of the wastewater treatment plant to clarify that the requirement does not apply to storage at the WWTP, based on comment.
9VAC25-31-100 Q 14 a (4)	Field operations – storage – field reclamation of offloading (staging) areas.	Revised language to read: "(4) Field reestablishment of offloading (staging) areas.	Revised to say reestablishment of offloading areas, based on comments received.
9VAC25-31-100 Q 14 b (3)	Application methodology: "(3) Procedures used to ensure that operations address the following constraints: application of biosolids to frozen ground, pasture/hay fields, crops for direct human consumption and saturate or ice-covered..."	Replaced the word "saturate" with "saturated".	Correction of spelling of term.
9VAC25-31-100 Q 14 b (3)	Application methodology: "(3) Procedures used to ensure...or ice-covered or snow-covered ground; maintenance buffer zones, slopes..."	Replaced phrase "maintenance buffer zones" with establishment of setback distances".	Revised to clarify requirements and to be consistent with new "setback language".
9VAC25-31-100 Q 15	Evidence of financial responsibility.	Added period at end of subdivision.	Editorial correction.
9VAC25-31-100 Q 16 c (13)	The following information, as applicable to any ground water monitoring...	Replaced "ground water" with "groundwater".	To be consistent with common usage.
9VAC25-31-100 Q 16 c (13) (a)	A description of any ground water monitoring...	Replaced "ground water" with "groundwater".	To be consistent with common usage.
9VAC25-31-100 Q 16 c (13) (b)	Any available ground water monitoring data...	Replaced "ground water" with "groundwater".	To be consistent with common usage.
9VAC25-31-100 Q 16 c (13) (c)	A copy of any ground water monitoring plan...	Replaced "ground water" with "groundwater".	To be consistent with common usage.
9VAC25-31-100 Q 16 c	A copy of any certification that has been obtained	Replaced "ground water" with "groundwater".	To be consistent with common usage.

(13) (d)	from a qualified ground water scientist...		
9VAC25-31-280 A	"A. A fact sheet shall be prepared...for every draft permit that includes a biosolids land application plan under 9VAC25-31-100 C 2..."	Delete reference to a "plan" and revise section reference to 9VAC25-31-100 D 2. Revise to read: "A. A fact sheet shall be prepared...for every draft permit that includes a biosolids land application under 9VAC25-31-100 D 2..."	Revised to correct terminology and to update the section reference number.
9VAC25-31-280 B 9	"9. For every permit to be issued to a treatment works owned by a person other than a state or municipality, an explanation of the board 's decision on regulation of users;"	Deleted extra space and corrected punctuation. Revised to read: "9. For every permit to be issued to a treatment works owned by a person other than a state or municipality, an explanation of the board's decision on regulation of users;"	Grammatical correction. Based on discussions with the AG's Office.
9VAC25-31-280 B 11	The fact sheet shall include, when applicable: (11) For permits that include a biosolids land application plan...	Requirement deleted.	The land application plan is no longer a requirement of the regulations.
9VAC25-31-280 B 12	The fact sheet shall include, when applicable: (12) Justification of waiver of any application requirement...	Requirement renumbered to (11).	Requirement renumbered to (11) to reflect deletion of original requirement.
9VAC25-31-290 C 1 d	"d. Any state agency responsible for plan development under § 208(b)(2), 208(b)(4) or § 303(e) of the CWA..."	Revised to insert § sign. Revised to read: "d. Any state agency responsible for plan development under § 208(b)(2), § 208(b)(4) or § 303(e) of the CWA..."	Grammatical correction. Based on discussions with the AG's Office.
9VAC25-31-290 D 1 f	"f. A general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice or practices..."	Revised to read: "f. A general description of the location of each existing or proposed discharge point and the name of the receiving water and the biosolids use and sewage sludge disposal practice or practices..."	Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-31-290 H	"H. Following submission of an application for a new permit for land application of biosolids or land	Revised to include reference to "the department" and a "good faith effort to notify". Revised to read: "H.	Revised to use consistent terminology throughout the

	disposal of treated sewage, stabilized sewage sludge, or stabilized septage, DEQ shall notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields..."	Following submission of an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, the department shall make a good faith effort to notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields..."	regulations. Based on discussions with the AG's Office.
9VAC25-31-290 J	Before issuing any permit, if the department finds that there are localities particularly affected by the permit, the department shall...	Replaced "department" with "board".	In previous proposed amendment, board was changed to department. Changing back to the board to be consistent with the process.
9VAC25-31-290 J 3	Accept written comments for up to 15 days after any public hearing on the permit, unless the department decides to shorten the period.	Revised language to read: "Accept written comments for at least 15 days after any public hearing on the permit, unless the board votes to shorten the period."	Revised to say accept written comment for at least 15 days. In previous proposed amendment, board was changed to department decides; changed back to the board votes to be consistent with current procedures.
9VAC25-31-390 A 16	"When required by a permit condition to incorporate a land application plan for beneficial reuse of biosolids, to revise an existing land application plan, or to add a land application plan.	Requirement deleted.	The land application plan requirement is no longer included in the regulations.
9VAC25-31-440 C	Permits and direct enforceability.	Added new requirement: "C. No person shall land apply Class B biosolids on any land in Virginia unless that land has been identified in an application to issue, reissue or modify a permit and approved by the board."	Added language to clarify requirements.

9VAC25-31-440 D	Permits and direct enforceability.	Added new requirement: "D. No person shall land apply, market or distribute biosolids in Virginia unless the biosolids source has been approved by the board."	Added language to clarify requirements.
9VAC25-31-460 B	Additional or more stringent requirements: "B. Nothing in this part precludes another state agency with responsibility for regulating biosolids or sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use of biosolids or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use of biosolids or disposal of sewage sludge."	Revised requirement: "B. Nothing in this part precludes the authority of another state agency; any political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge."	Statute gives local government specific authority, it cannot be more stringent than this regulation
9VAC25-31-460 C	Additional or more stringent requirements: "C. For biosolids land application where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation..."	Replaced the term "buffering" with "setback distances".	To be consistent with "setback" and "setback distance" language in the regulation.
9VAC25-31-475	Local enforcement of sewage sludge regulations.	Revised title to read: "Local enforcement of biosolids regulations."	Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-31-485	Requirements for permittees who land apply biosolids.	Revised to read: "Requirements for a person who land applies biosolids."	Renamed to conform with language used in other sections and

			to apply to anyone who applies biosolids
9VAC25-31-485 A	"Any person who land applies biosolids authorized by a VPDES permit shall be certified in accordance with requirements specified in the Virginia Pollution Abatement Regulation, Article 5, Certification of Land Applicators, as set forth in 9VAC25-32-690 through 9VAC25-32-760."	Revised to read: "No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless and individual holding a valid certificate of competence as specified in the Virginia Pollution Abatement Program Regulation, Article 5, Certification of Land Applicators, as set forth in 9VAC25-32-690 through 9VAC25-32-760 is onsite at all times during such land application."	Revise language to be in accordance with statute.
9VAC25-31-485 B 1	"Permit holders shall use a unique control number assigned by the department as an identifier for fields permitted for land application."	Revised to read: "1. Permit holders shall use a DEQ control number, if previously assigned, identifying each land application field. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location."	Revised to provide for instances where a DEQ control number has not been assigned. Change based on comments received.
9VAC25-31-485 B 2	Requirement for a written agreement: "A written agreement shall be established between the landowner and permit applicant or permit holder to be submitted with the permit application, whereby the landowner shall consent to the application of biosolids on his property and certify that no concurrent agreements are in effect for the fields to be permitted for biosolids application. The landowner agreement shall include an acknowledgement by the landowner of any site	Revised to read: "A written agreement shall be established between the landowner and permit applicant or permit holder to be submitted with the permit application, whereby the landowner shall consent to the application of biosolids on his property. The landowner agreement shall include:	Revised and reorganized to clarify requirements. Based on comments received and SWCB request.

	restrictions identified in the permit. The responsibility for obtaining and maintaining the agreements lies with the permit holder."		
9VAC25-31-485 B 2 (a)		Added new requirement: "(a) A statement certifying that the landowner is the sole owner or one of multiple owners of the property or properties identified on the landowner agreement;"	New language added to clarify requirements. Based on comments received and SWCB request.
9VAC25-31-485 B 2 (b)		Added new requirement: "(b) A statement certifying that no concurrent agreements are in effect for the fields to be permitted for biosolids application;"	New language added to clarify requirements. Based on comments received and SWCB request.
9VAC25-31-485 B 2 (c)		Added new requirement: "(c) An acknowledgement that the landowner shall notify the permittee when land is sold or ownership transferred;"	New language added to clarify requirements. Based on comments received and SWCB request.
9VAC25-31-485 B 2 (d)		Added new requirement: "(d) An acknowledgement that the landowner shall notify the permittee if any conditions change such that any component of the landowner agreement becomes invalid;"	New language added to clarify requirements. Based on comments received and SWCB request.
9VAC25-31-485 B 2 (e)		Added new requirement: "(e) Permission to allow department staff on the landowner's property to conduct inspections;"	New language added to clarify requirements. Based on comments received and SWCB request.
9VAC25-31-485 B 2 (f)		Added new requirement: "(f) An acknowledgement by the landowner of ay site restrictions identified in the regulation; and"	New language added to clarify requirements. Based on comments received and SWCB request. Delete "and" to account for an additional requirement. Based on SWCB actions.

<p>9VAC25-31-485 B 2 (g)</p>		<p>Added new requirement: "(g) An acknowledgement that the landowner has received a biosolids fact sheet approved by the department-; <u>and</u>"</p>	<p>New language added to clarify requirements. Based on comments received and SWCB request. Delete "period" and insert a "semicolon" and the word "and" to account for an additional requirement. Based on SWCB actions.</p>
<p>9VAC25-31-485 B 2 (h)</p>		<p>Add new requirement regarding removal of signs by the landowner. New language: "<u>(h) An acknowledgement that the landowner shall not remove notification signs placed by the permit holder.</u>"</p>	<p>New language added to clarify requirements. Based on SWCB actions.</p>
<p>9VAC25-31-485 B 3</p>	<p>New or revised landowner agreements shall be submitted to the department if new land is being added to the permit or if there have been changes in ownership of land included in a permit reissuance request.</p>	<p>Revised to read: "New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids."</p>	<p>Language revised to clarify requirements. Based on comments received and SWCB request.</p>
<p>9VAC25-31-485 B 4</p>		<p>Added new requirement: "4. For permits modified in order to incorporate changes to this regulation, the permit holder shall, within 60 days of the effective date of the permit modification, advise the landowner by certified letter of the requirement to provide a new landowner agreement. The letter shall include instructions to the landowner for signing and returning the new landowner</p>	<p>Language revised to clarify requirements. Based on comments received and SWCB request. Use of "certified" maintains consistent language with the type of mail service required in the final regulation in the financial responsibility sections. Certified mail is consistent with the type of</p>

		agreement, and shall advise the landowner that the permit holder's receipt of such new landowner agreement is required prior to application of biosolids to the landowner's property."	service required to mail out permits, consistent with the regulatory requirements for CAFOs to file certain notices; and there is no place in any other DEQ statute or other regulations that require anything beyond certified mail.
9VAC25-31-485 B 5	Part of original 9VAC25-31-485 B 2: "The responsibility for obtaining and maintaining the agreements lies with the permit holder."	Language renumbered and included as 9VAC25-31-485 B 5.	Language revised to clarify requirements.
9VAC25-31-485 D 1	Requirements for permittees who land apply sewage sludge/biosolids. Notification requirements; provide notification at least 100 days prior to commencing land application	Revised to provide notice at least 100 days prior to commencing the first land application at the site.	Revised in order to clarify that it is a one-time notification.
9VAC25-31-485 D 1	Requirements for permittees who land apply sewage sludge biosolids. Notification requirements; 100 day notice maybe satisfied by providing list of all site on list 100 days prior to any of the sites	Added the department's notice to the local government at the time of receiving the permit application if all necessary information is included in the notice.	This was based on TAC discussion and comments received and may provide longer notice since the permit processing time may be up to 180 days.
9VAC25-31-485 D 2	Notification of land application activity; provide notification at least 14 days prior to commencing land application; a. – h. specific notification requirements	Deleted list of requirements that were added in original amendments and returned to statutory language, based on comment. Moved the requirements to new requirement for 5 day signage notice. Added that notice will be given to local government unless they request in writing not to receive the notice.	Both changes were based on comments received and on TAC discussions
9VAC25-31-485 D 3	Notification of land application activity; provide daily notification	Revised to clarify: Not more than 24 hours prior to commencing of land	Both changes were based on comments received and on TAC

	The permittee shall deliver or cause to be delivered daily notification to the department and the chief executive officer or designee for the local government where the site is located prior to commencing land application activities.	application activities, including delivery of biosolids at a permitted site, the permittee shall notify in writing the department and the chief executive officer or designee for the local government where the site is located Added that notice will be given to local government unless, unless they request in writing not to receive the notice. This notification shall include only sites where land application activities will commence within 24 hours or where biosolids will be staged within 24 hours.	discussions. Revised to clarify requirements.
9VAC25-31-485 F 1	Posting of signs: "1. At least five business days prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post signs at the site that comply with this section, are visible and legible from the public right-of-way in both directions of travel and conform to the specifications herein..."	Replaced "specification herein" with "specifications in this subsection".	To clarify requirements.
9VAC25-31-485 F 1	Posting of signs: "1. At least five business days...The sign shall remain in place for at least five business days after land application has been completed at the site."	Added statement regarding removal of signs. Revised to read: "1. At least five business days...The sign shall remain in place for at least five business days after land application has been completed at the site. <u>The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site.</u> "	To clarify requirements and to conform the signage requirement to access restrictions. Based on action of the SWCB.
9VAC25-31-485 F 1 a	Notification of land application activity; 5 day signage; If the site is not	Moved up from F.1 b and removed criteria that sign at entrance only needed if	To clarify requirements.

	located adjacent to a public right-of-way, the sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site.	there is no field road frontage, based on comment: A sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site used by the biosolids transport vehicles.	
9VAC25-31-485 F 1 b	Notification of land application activity; ; 5 day signage; if site is located adjacent to a public right-of-way, post along road frontage	Renumbered and revised to say if field is located adjacent to a public right-of-way, at least one sign shall be posted along each public road frontage.	Based on comments received and to clarify requirements.
9VAC25-31-485 F 1 b	Notification of land application activity; ; 5 day signage; If the site is not located adjacent to a public right-of-way, the sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site.	Struck, partially moved to a.	To clarify requirements.
9VAC25-31-485 F 1 c	Notification of land application activity; 5 day signage; The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or to be consistent with local government ordinances and other requirements regulating the use of signs	Revised to read: The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or where requirements conflict with local government ordinances and other requirements regulating the use of signs.	Revised to clarify; based on comments received.
9VAC25-31-485 F 2	Notification of land application activity; 5 day signage	Added requirement to notify department when signs are posted. Upon the posting of signs at a land application site prior to commencing land application, the permittee shall deliver or cause to be delivered written notification to the department and the chief	Revised based on TAC discussions and to clarify requirements.

		<p>executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. Notification shall be delivered to the department by close of business on the following day. The notice shall include the following:</p>	
9VAC25-31-485 F 2 a. – d.	Notification of land application activity; 5 day signage	<p>Added requirement to notify department when signs are posted. a. The name and telephone number of the permit holder, including the name of a representative knowledgeable of the permit;</p> <p>b. Identification by tax map number and the DEQ control number for sites on which land application is to take place;</p> <p>c. The name or title, and telephone number of at least one individual designated by the permit holder to respond to questions and complaints related to the land application project, if not the permit holder identified in 9VAC25-31-485 F 2 a;</p> <p>d. The approximate dates on which land application is to begin and end at the site.</p>	Language moved from 14 day notification and revised based on comments received.
9VAC25-31-485 F 3	Notification of land application activity; 5 day signage.	Section renumbered.	Renumbered due to inserting additional subsection.
9VAC25-31-485 F 3 b	Sign details.	Deleted requirement for general company phone number and moved requirement for the telephone number of an individual to a new subdivision c.	To clarify requirements.
9VAC25-31-485 F 3 c	Sign details.	Split requirements from subdivision 3 b into 2 items to clarify – require phone	To clarify requirements.

		number of an individual designated by the permit holder to respond to complaints and inquiries.	
9VAC25-31-485 F 3 d	Sign details.	Section renumbered to from 3 c to 3 d.	Renumbered to reflect addition of new subdivisions.
9VAC25-31-485 F 4	Notification of land application activity; 5 day signage	Subsection renumbered from 3 to 4.	Renumbered due to inserting additional subsection.
9VAC25-31-485 G	Operations management plan.	Subsection renamed: Biosolids management plan.	Based on comments received.
9VAC25-31-485 G 1	The permit holder shall maintain an operations management plan which shall consist of three components:	Revised language to read: "1. The permit holder shall maintain and implement a Biosolids management plan which shall consist of three components:"	To clarify requirements that a biosolids management plan must be maintained and implemented.
9VAC25-31-485 G 2		Added new requirement: "2. The biosolids management plan and all of its components shall be incorporated as an enforceable part of the permit."	To clarify requirements.
9VAC25-31-485 G 3	9VAC25-31-485 G 2	Subdivision number revised to G 3.	Subdivision number revised to reflect addition of new requirement.
9VAC25-31-485 G 4	9VAC25-31-485 G 3	Subdivision number revised to G 4.	Subdivision number revised to reflect addition of new requirement.
9VAC25-31-490 B	Sampling and analysis. "B. Methods in the materials listed below shall be used to analyze samples..."	Language revised: "B. Methods in the materials listed below or in 40 CFR Part 136 shall be used to analyze samples..."	Revised based on comments received and to incorporate the currently approved methods.
9VAC25-31-500	Definitions. "Agronomic rate" – use of the term "ground water".	Replaced "ground water" with "groundwater".	To conform to common usage.
9VAC25-31-500	Definitions: "Annual pollutant loading rate"	Delete punctuation mark (").	Editorial correction.
9VAC25-31-500	Definitions: "Aquifer" – use of the term "ground water".	Replaced "ground water" with "groundwater".	To conform to common usage.
9VAC25-31-500	Definitions: "Biosolids".	Deleted definition of "biosolids".	Previously defined in 9VAC25-31-10. Elimination of redundancy. Based

			on discussions with the AG's Office.
9VAC25-31-500	Definitions: "Contaminate an aquifer" – use of the term "ground water".	Replaced "ground water" with "groundwater".	To conform to common usage.
9VAC25-31-500	Definitions: "Cover crop".	Deleted definition of "Cover crop".	Deleted definition "cover crop" because it is nutrient management related and defined in DCR regulation, based on TAC discussion.
9VAC25-31-500	Definitions: "Food crops" means crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.	Revised to read: "Food crops" means crops produced primarily for consumption by humans. These include, but are not limited to, fruits, vegetables, and tobacco.	Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-31-500	Definitions: "Ground water".	Replaced "ground water" with "groundwater".	To conform to common usage.
9VAC25-31-500	Definitions: "Land application".	Deleted definition of "Land application".	Replaced with new definition of "Land application", in regard to biosolids.
9VAC25-31-500	Definitions:	Added new definition: "Land application" means, in regard to biosolids, the distribution of biosolids by spreading or spraying on the surface of the land, injecting below the surface of the land, or incorporating into the soil with a uniform application rate for the purpose of fertilizing the crops and vegetation or conditioning the soil. Sites approved for land application of biosolids in accordance with this regulation are not to be considered to be treatment works. Bulk disposal of stabilized sludge in a confined area, such as landfills, is not land application. For the purpose of this regulation, the use of biosolids in agricultural	New "biosolids specific" definition of "land application" added to clarify requirements.

		research and the distribution and marketing of exceptional quality biosolids is not land application."	
9VAC25-31-500	Definitions.	Added new definition: "Land application area" means, in regard to biosolids, the area in the permitted field, excluding the setback distances, where the biosolids may be applied.	Added new definition based on comments received.
9VAC25-31-500	Definitions:	Added new definition: "Land applier" means someone who land applies biosolids pursuant to a valid permit from the department as set forth in this regulation and 9VAC25-32-690 through 9VAC25-32-760."	Added new definition of "land applier" based on comments received.
9VAC25-31-500	Definition: "Malodor" means an unusually strong or offensive odor associated with biosolids or sewage sludge as distinguished from odors normally associated with biosolids or sewage sludge.	Deleted definition.	Term previously defined in 9VAC25-31-10.
9VAC25-31-500	Definitions: "Odor sensitive receptor" means, in context of land application of biosolids, a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities, hospitals and convalescent homes.	Revised definition to read: "Odor sensitive receptor" means in the context of land application of biosolids, any health care facility, such as hospitals, convalescent house, etc. or a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities.	Revised to clarify definition. Based on discussions with the AG's Office.
9VAC25-31-500	Definitions: "Person who prepares sewage sludge" means either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from	Revised definition to read: "Person who prepares biosolids" means either the person who generates biosolids during the treatment of domestic sewage in a treatment works or the person who derives a material from	Revised to be consistent with use in the regulations and based on comments received.

	sewage sludge."	sewage sludge."	
9VAC25-31-500	Definitions: "Qualified ground water scientist".	Replaced "ground water" with "groundwater" in the definition.	To conform to common usage.
9VAC25-31-500	Definitions:	Added new definition: "Use" means to manage or recycle a processed waste product in a manner so as to derive a measurable benefit as a result of such management."	To clarify requirements.
9VAC25-31-505 A 1	Universal requirements for land application operations – "A nutrient management plan approved by the Department of Conservation and Recreation shall be required..."	Renumbered existing language to: "1. A nutrient management plan approved..."	Renumbered to clarify - Put the existing language into a list.
9VAC25-31-505 A 1 a	Universal requirements for land application operations – "sites operated by an owner or lessee of a confined animal feeding operation..."	Renumbered existing language to: "a. sites operated by an owner or lessee of a confined animal feeding operation..."	Renumbered to clarify - Put the existing language into a list.
9VAC25-31-505 A 1 b	Universal requirements for land application operations – "sites where land application more frequently than once every three years..."	Renumbered existing language to: "b. sites where land application more frequently than once every three years..."	Renumbered to clarify - Put the existing language into a list.
9VAC25-31-505 A 1 b	"b. sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and	Delete "and". Revised to read: "b. sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;	Revised to account for the addition of a new subdivision.
9VAC25-31-505 A 1 c		Added new requirement: "c. mined or disturbed land sites where land application is proposed at greater than agronomic rates; and	Added requirement to be consistent with requirements throughout the regulations relating to biosolids.
9VAC25-31-505 A 1 d	Universal requirements for land application operations – "other sites based on site-specific conditions..."	Renumbered existing language to: "d. other sites based on site-specific conditions..."	Renumbered to clarify - Put the existing language into a list.

<p>9VAC25-31-505 A 1 e</p>	<p>Universal requirements for land application operations.</p>	<p>Added new language: "e. Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site."</p>	<p>Clarifies that approved NMP is required for these conditions for all sites, not only those included at the time of permit application</p>
<p>9VAC25-31-505 A 2</p>	<p>Universal requirements for land application operations.</p>	<p>Added new requirement: "2. The nutrient management plan shall be available for review by the department at the land application site during biosolids land application."</p>	<p>To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3.</p>
<p>9VAC25-31-505 A 3</p>	<p>Universal requirements for land application operations.</p>	<p>Added new requirement: "3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the nutrient management plan to the farm operator of the site, the Department of Conservation and Recreation and the chief executive officer or designee for the local government, unless they request in writing not to receive the nutrient management plan."</p>	<p>To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3.</p>
<p>9VAC25-31-505 A 4</p>	<p>Universal requirements for land application operations.</p>	<p>Added new requirement: "4. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for land application sites where the soil test phosphorus levels exceed the values in Table 1 of this section. For purposes of approval, permittees should submit the nutrient management plan to the Department of Conservation and Recreation at least 30 days</p>	<p>To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3.</p>

		prior to the anticipated date of land application to ensure adequate time for the approval process."	
9VAC25-31-505 A 4	Universal requirements for land application operations.	Added Table 1 entitled "Soil Phosphorus Levels Requiring NMP Approval" that identifies soil phosphorus levels for regions within the state.	Added: 9VAC25-31-505 Table 1 to identify the P levels that require pre approved NMP to clarify requirements.
9VAC25-31-505 B	"Sewage sludge shall be treated to meet standards for land application of biosolids as required ...No person shall alter the composition of biosolids at a site approved for land application of biosolids under a Virginia Pollution Abatement Permit..."	Revised reference to "a Virginia Pollution Abatement Permit" to "VPDES Permit".	Correction of permit program reference.
9VAC25-31-505 C	Bulk biosolids shall be land applied in accordance with the Virginia Pollution Abatement Permit Regulation, Article 3, Biosolids Use Standards and Practices set forth in 9VAC25-32-490 through 9VAC25-32-660."	Revised language to read: "C. Bulk biosolids meeting Class B pathogen reduction standards shall be land applied in accordance with the Virginia Pollution Abatement Permit Regulation, Article 3, Biosolids Use Standards and Practices set forth in 9VAC25-32-490 through 9VAC25-32-580."	Revised to clarify requirements and Corrected to include only sections through 9VAC25-32-580; sections 590 – 660 were repealed.
9VAC25-31-505 D	"Surface incorporation may be required on cropland by the department, or the local monitor with approval of the department, to mitigate excessive odors, when incorporation is practicable and compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service."	Revised language to read: "Surface incorporation may be required on cropland by the department, or the local monitor with approval of the department, to mitigate malodors, when incorporation is practicable and compatible with a soil conservation plan of contract meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service."	Revised based on comments received.
9VAC25-31-	"For applications where	Revised to read: "E. For	Deleted the phrase

505 E	surface applied biosolids are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors."	applications where surface applied biosolids are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended setback distances when necessary to protect odor sensitive receptors."	"buffer zone" to be consistent with usage in the regulations.
9VAC25-31-510 A	General requirements for bulk biosolids: "A. This subpart applies to any person who prepares..."	Revised to read: "A. This subpart <u>article</u> applies to any person who prepares..."	The term "subpart" is from the federal language and refers to Subpart B, which is the entire "land application" section which would be equivalent to VPDES Part VI Article 2 Biosolids Applied to the Land. That change in terminology is an omission from the original incorporation of the 503 into the VPDES Regulation.
9VAC25-31-510 B 1	General requirements for bulk biosolids: "The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply..."	Revised to read: "The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 B through F do not apply..."	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted.
9VAC25-31-510 C 1	General requirements for bulk material derived from biosolids: "The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply..."	Revised to read: "The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 B through F do not apply..."	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted.
9VAC25-31-510 E	"The general requirements in 9VAC25-31-530 and the management practices in	Revised to read: "The general requirements in 9VAC25-31-530 and the management practices in	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part

	9VAC25-31-550 do not apply..."	9VAC25-31-550 B through F do not apply..."	that includes distribution and marketing of EQ biosolids and cannot be exempted.
9VAC25-31-510 F	"The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply..."	Revised to read: "The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 B through F do not apply..."	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted.
9VAC25-31-510 G	General requirements for bulk biosolids: "G. The requirements in this subpart do not apply when a material derived..."	Revised to read: "G. The requirements in this subpart <u>article</u> do not apply when a material derived..."	The term "subpart" is from the federal language and refers to Subpart B, which is the entire "land application" section which would be equivalent to VPDES Part VI Article 2 Biosolids Applied to the Land. That change in terminology is an omission from the original incorporation of the 503 into the VPDES Regulation.
9VAC25-31-540 B – Table 1	Table 1 – Footnote ⁽¹⁾ Biosolids with a molybdenum concentration greater than 40 mg/kg shall not be applied to land used for livestock grazing."	Deleted footnote reference and associated footnote in Table 1.	Based on comments received.
9VAC25-31-540 B – Table 2	Table 2 – Footnote ⁽²⁾ The maximum cumulative application rate is currently under study by USEPA."	Revised footnote to read: ⁽²⁾ The maximum cumulative application rate is currently under study by USEPA. Research suggests that for Molybdenum a cumulative pollutant loading rate below 40 kg/hectare may be appropriate to reduce the risk of copper deficiency in	Revised based on comments received.

<p>9VAC25-31-540 B Table 3</p>	<p>Table 3 – Footnote ⁽¹⁾The monthly average concentration is currently under study by the USEPA."</p>	<p>grazing animals." Revised footnote to read: ⁽¹⁾The monthly average concentration is currently under study by the USEPA. Research suggests that a monthly average Molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals."</p>	<p>Revised based on comments received.</p>
<p>9VAC25-31-543 A</p>	<p>Soils monitoring – "A. Soil shall be sampled and analyzed prior to biosolids application to determine site suitability and to provide background data. Soil shall be sampled and analyzed in accordance with Table 1 of this section. Reduced monitoring may apply for typical agricultural projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (Table 1 of this section). Reduced monitoring may also apply to one-time biosolids applications to forest or reclaimed lands. For background analysis, random composite soil samples from the zone of incorporation are required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre)."</p>	<p>Revised to read: "A. Soil shall be sampled and analyzed prior to biosolids application to determine site suitability and to provide background data. No sample analysis used to determine application rates shall be more than 3 years old at the time of biosolids land application. Soil shall be sampled and analyzed in accordance with Table 1 of this section. Reduced monitoring may also apply to one-time biosolids applications to forest or reclaimed lands. For background analysis, random composite soil samples from the zone of incorporation are required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre)."</p>	<p>Revised to clarify requirements. Struck Reduced monitoring will usually apply for typical agricultural utilization projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (see Table 1) because table was restructured to eliminate variations due to chosen application methods.</p>
<p>9VAC25-31-543 A</p>	<p>Table 1 – Soil Test Parameters for Land Application Sites and Application frequencies and Supernatant.</p>	<p>Deleted application frequencies and storage parameters. Revised table to address only soil test parameters of Soil pH (Std. Units; Available phosphorus (ppm); Extractable potassium (ppm);</p>	<p>Deleted categories, parameters are required for all application rates, supernatant is not related to soil and is considered a biosolids and follows</p>

		Extractable sodium (mg/100g); Extractable calcium (mg/100g); Extractable magnesium (mg/100g); Zinc (ppm); and Manganese (ppm) and revised and clarified footnotes.	that monitoring. Deleted nitrate, not a parameter typically monitored in the soil. Deleted Bray method from footnotes because it is no longer allowed.
9VAC25-31-543 A	Table 1 - Footnote 1.	Delete (*) designation.	Footnote notation not used in table.
9VAC25-31-545	Crop monitoring.	Delete section.	The regulation now requires NMP for all sites, crop monitoring will not be required
9VAC25-31-547	Ground water monitoring.	Revised to read: "Groundwater monitoring."	To conform to common usage. Based on discussions with the AG's Office.
9VAC25-31-547 A	"A. Monitoring wells may be required by the department for land treatment sites, sludge lagoons, biosolids land application sites, or biosolids storage facilities to monitor ground water quality."	Replaced "ground water" with "groundwater". Revised to read: "A. Monitoring wells may be required by the department for land treatment sites, sludge lagoons, biosolids land application sites, or biosolids storage facilities to monitor groundwater quality."	To conform to common usage. Based on discussions with the AG's Office.
9VAC25-31-547 B	"B. If ground water monitoring is required, a ground water monitoring plan shall be submitted to the department for approval that includes at a minimum:"	Replaced "ground water" with "groundwater" 2 times in subsection. Revised to read: "B. If groundwater monitoring is required, a groundwater monitoring plan shall be submitted to the department for approval that includes at a minimum:"	To conform to common usage. Based on discussions with the AG's Office.
9VAC25-31-550 F	Management practices – "F. Either a label shall be affixed to the bag or other container in which biosolids that is sold or given away for application to the land, or an information sheet shall be provided to the person who received biosolids sold of given away in an	Revise language to include phrase "in a bag or". Subdivision now reads: "F. Either a label shall be affixed to the bag or other container in which biosolids that is sold or given away for application to the land, or an information sheet shall be provided to the person who received biosolids sold of	Revised to clarify requirements.

	other container for application to the land..."	given away in a bag or container for application to the land..."	
9VAC25-31-580 B 4	"4. The nitrogen requirement for the crop or vegetation grown on each site during a 365-day period;"	Added "phosphorus" to the requirements. Revised to read: "4. The nitrogen and phosphorus requirement for the crop or vegetation grown on each site during a 365-day period;"	Revised to clarify requirements.
9VAC25-31-590 B	Reporting requirements: "B. An activity report shall be submitted (electronically or postmarked) to the department by the 15 th of the month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4. The report shall indicate those sites where land application activities took place during the previous month."	Language revised to read: "B. An activity report shall be submitted (electronically or postmarked) to the department by the 15 th of each month for land application activity that occurred in the previous calendar month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4. The report shall indicate those sites where land application activities took place during the previous month. If no land application occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred."	Revised to clarify requirements and to be consistent with changes made to Fee regulations.
9VAC25-31-590 C	"C. Biosolids application rate shall be calculated using results from sampling and analysis completed during the most recent 12 months of monitoring. For proposed treatment works, rates may be initially based on the biosolids characteristic produced by similar generating facilities.	Deleted 12 month rolling average requirement. Replaced with language from 9VAC25-31-590 D.	Based on comments received and to clarify requirements.
9VAC25-31-590 D	"D. Records shall be maintained documenting the required treatment and quality characteristics and the maximum	Renumbered to 9VAC25-31-590 C.	Renumbered to account for deletion of previous subdivision.

	allowable land application loading rates established for biosolids use..."		
9VAC25-31-590 E	"E. The generator and owner shall maintain the records for a minimum period of five years. Sites receiving frequent applications of biosolids that meet or exceed maximum cumulative constituent loadings and dedicated disposal sites should be properly referenced for future land transactions (Sludge Disposal Site Dedication Form)."	Renumbered to 9VAC25-31-590 D.	Renumbered to account for deletion of previous subdivision.
9VAC25-31-710 A 3 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 4 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 5 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 5 b	"(3) When the density of enteric viruses in the	Reinsert the term "sewage sludge" in place of	Revised to correct usage of terms.

(3)	sewage sludge prior to pathogen treatment...operating parameters for the pathogen treatment process that produces the biosolids that meets the enteric virus density requirement are documented."	"biosolids". Revised to read: "(3) When the density of enteric viruses in the sewage sludge prior to pathogen treatment...operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented."	
9VAC25-31-710 A 5 b (4)	"(4) After the enteric virus reduction in subdivision 5 b (3) of this subsection is demonstrated for the pathogen treatment process, the biosolids continues to be Class A with respect to enteric viruses..."	Reinsert the term "sewage sludge" in place of "biosolids". Revised to read: "(4) After the enteric virus reduction in subdivision 5 b (3) of this subsection is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to enteric viruses..."	Revised to correct usage of terms.
9VAC25-31-710 A 6 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 6 b	"b. The density of enteric viruses in the biosolids shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "b. The density of enteric viruses in the biosolids shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 6 c	"c. The density of viable helminth ova in the biosolids shall be less than one per four grams	Revised to reinsert the phrase: "or disposed". Revised to read: "c. The density of viable helminth	To clarify requirements and to use consistent terminology

	of total solids (dry weight basis) at the time the biosolids is used; at the time the biosolids is prepared for sale..."	ova in the biosolids shall be less than one per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	throughout the regulations.
9VAC25-31-710 A 7 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 A 8 a	"a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used; at the time the biosolids is prepared for sale..."	Revised to reinsert the phrase "or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than...at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale..."	To clarify requirements and to use consistent terminology throughout the regulations.
9VAC25-31-710 C 1	Domestic septage. "1. The site restriction in subdivision 6 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site;"	Subdivision designations deleted and punctuation changed to account for deletion of C 2 – option to lime stabilize septage. Revised to read: "C. Domestic septage [,1;] The site restrictions..."	The option to lime stabilize septage was stricken in order to avoid additional site restrictions. Land application of lime stabilized septage in prohibited by Virginia statute.
9VAC25-31-710 C 2	Domestic septage. "2. The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher..."	Subdivision deleted.	The option to lime stabilize septage was stricken in order to avoid additional site restrictions. Land application of lime stabilized septage in prohibited by Virginia statute.
9VAC25-31 – Documents Incorporated	Reference document: Method 1668B.	Strike document from references.	The requirement to use 1668B for PCB analysis has been eliminated from the

by Reference			requirements.
9VAC25-32	The use of the phrase "Operations management plan".	Revised phrase to read: "biosolids management plan" throughout regulation.	Revised based on comments received; confusing with the term operations and maintenance Manual.
9VAC25-32	The use of the term "Ground water".	Revised term to groundwater throughout regulation.	Revised to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32	The use of the terms Buffer and Buffer zone.	The term buffer was replaced with setback distance and the term buffer zone was replaced with setback area throughout the regulation.	Revised to clarify requirements and to avoid confusion with "vegetated buffers".
9VAC25-32-10	Definitions. "Agronomic rate" means the whole sludge application rate (dry weight basis) designed: (1) to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land and (ii) to minimize the amount of nitrogen in the biosolids that passes below the root zone of the crop or vegetation grown on the land to the ground water."	Revised definition to relate "agronomic rate" specifically to biosolids and to replace "ground water" with "groundwater". Definition now reads: "Agronomic rate" means, in regard to biosolids the whole sludge application rate (dry weight basis) designed: (1) to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land and (ii) to minimize the amount of nitrogen in the biosolids that passes below the root zone of the crop or vegetation grown on the land to the groundwater."	Revised to clarify requirements and to be consistent with common usage.
9VAC25-32-10	Definitions: "Biosolids" means a sewage sludge that has received an established treatment and is managed in a manner to meet the required pathogen control and	Added additional information to definition regarding dry residue content. Revised to read: "Biosolids" means a sewage sludge that has received an established treatment and is managed in	Revised to clarify definition and to provide additional information.

	vector attraction reduction, and contains concentrations of regulated pollutants below the ceiling limits established in 40 CFR Part 503 and 9VAC25-32-660, such that it meets the standards established for use of biosolids for land application, marketing, or distribution in accordance with this regulation.	a manner to meet the required pathogen control and vector attraction reduction, and contains concentrations of regulated pollutants below the ceiling limits established in 40 CFR Part 503 and 9VAC25-32-660, such that it meets the standards established for use of biosolids for land application, marketing, or distribution in accordance with this regulation. Liquid biosolids contains less than 15% dry residue by weight. Dewatered biosolids contains 15% or more dry residue by weight.	
9VAC25-32-10	Definitions: "Odor sensitive receptor" means, in context of land application of biosolids, a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities, hospitals and convalescent homes.	Revised definition to read: "Odor sensitive receptor" means in the context of land application of biosolids, any health care facility, such as hospitals, convalescent house, etc. or a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities.	Revised to clarify definition. Based on discussions with the AG's Office.
9VAC25-32-10	Definitions: "Cover crop" means a crop, such as oats, wheat, or barley, not grown for harvest.	Deleted definition of "cover crop".	Deleted definition because it is nutrient management related and defined in DCR regulation, based on TAC discussion.
9VAC25-32-10	Definitions. "Facilities" means processes, equipment, storage devices and dedicated sites..."	Revised definition to be specific to biosolids. Definition revised to read: "Facilities" means, in regard to biosolids, processes, equipment, storage devices and dedicated sites..."	Revised to clarify requirements and to be specific to the biosolids regulations.
9VAC25-32-10	Definitions. "Ground water" means...	Replaced "ground water" with "groundwater".	Revised to be consistent with VPDES and in accordance with USGS Office of

			Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32-10	Definitions. "Land application" means the distribution of either treated wastewater...For the purpose of this regulation, the use of biosolids in agricultural research is not land application.	Revised definition to read: "Land application" means, in regard to biosolids, the distribution of either treated wastewater...For the purpose of this regulation, the use of biosolids in agricultural research and the distribution and marketing of exceptional quality biosolids are not land application.	Revised to clarify requirements.
9VAC25-32-10	Definitions.	Added new definition. "Land application area" means, in regard to biosolids, the area in the permitted field, excluding the setback areas, where biosolids may be applied.	Based on comments received.
9VAC25-32-10	Definitions. "Person who prepares sewage sludge" means either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives the material from sewage sludge.	Revised to read: "Person who prepares biosolids" means either the person who generates biosolids during the treatment of domestic sewage in a treatment works or the person who derives the material from sewage sludge.	Revised to be consistent with use in the regulation, based on comments received.
9VAC25-32-10	Definitions.	New definition. "Setback area" means the area of land between the boundary of the land application area and adjacent features where biosolids or other manager pollutants may not be land applied.	Added to clarify terminology in the regulation.
9VAC25-32-10	Definitions: "Sewage sludge" or "sludge" means any solid, semisolid, or liquid residues generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes but it is not limited to, domestic	Revised to read: "Sewage sludge" means any solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes but is not limited to, domestic septage; scum or solids removed in primary,	Revised definition to be consistent with the use of the term throughout the regulations.

	<p>septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. Liquid sludge contains less than 15% dry residue by weight. Dewatered sludge contains 15% or more dry residue by weight.</p>	<p>secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.</p>	
9VAC25-32-10	<p>Definitions. "Vector attraction" means the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.</p>	<p>Revised to read: "Vector attraction" means the characteristic of biosolids or sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.</p>	<p>Revised to be consistent with VPDES. Based on comments received.</p>
9VAC25-32-10	<p>Definitions: "Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307 (a) of the Clean Water Act (33 USC § 1317 (a)) which after discharge will, on the basis of available information, cause toxicity.</p>	<p>Revised definition to read: "Toxic pollutant" means any pollutant listed as toxic under section 307 (a)(1) or in the case of :sludge use or disposal practices" any pollutant identified in regulations implementing section 405 (d) of the CWA.</p>	<p>Revised to clarify and to correct citation.</p>
9VAC25-32-10	<p>Definitions.</p>	<p>Added new definition: "Vegetated buffer" means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing</p>	<p>Added to clarify changes to buffers and buffer (setback) language in the regulation.</p>

		water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.	
9VAC25-32-40 4	Exclusions. "4. Land disposal activity, including biosolids use or sewage sludge disposal or onsite waste treatment, when this activity is otherwise authorized by the department; and"	Subdivision revised: "4. Land disposal activity, including biosolids use or sewage sludge disposal or onsite waste treatment, when this activity is otherwise authorized by the department; and"	Revised to account for the addition of a new exclusion.
9VAC25-32-40 5	Exclusions.	Added a new exclusion: "5. Land disposal activity, including onsite waste treatment, when this activity is authorized by a Virginia Department of Health permit; and	
9VAC25-32-40 6	"9VAC25-32-40 5: Discharge authorized by EPA under the Safe Drinking Water Act Underground Injection Control Program (UIC), 40 CFR Part 144, and approved, in writing, by the board."	Subdivision numbering revised: "9VAC25-32-40 6: Discharge authorized by EPA under the Safe Drinking Water Act Underground Injection Control Program (UIC), 40 CFR Part 144, and approved, in writing, by the board."	Subdivision numbering revised to account for the addition of a new exclusion.
9VAC25-32-60 D 3	Application for a VPA permit. "3. In accordance with § 62.1-44.19:3 A of the Code of Virginia, no application for a permit or variance to authorize the storage of biosolids shall be complete unless it contains certification from the governing body of the locality in the biosolids is to be stored..."	Revised to read: "3. In accordance with § 62.1-44.19:3 A of the Code of Virginia, no application for a permit or variance to authorize the storage of biosolids shall be complete unless it contains certification from the governing body of the locality in which the biosolids is to be stored..."	Grammatical correction.
9VAC25-32-60 D 4	Application for a VPA permit. "4. No application for a permit to land apply biosolids in accordance with Part IX (9VAC25-32-310 et seq. of this chapter	Revised to read: "4. No application for a permit to land apply biosolids in accordance with Part IX (9VAC25-32-303 et seq. of this chapter shall be	Corrected section reference to 9VAC-25-32-303, due to section renumbering, oversight in original amendments.

	shall be complete..."	complete..."	
9VAC25-32-60 E	Application for a VPA permit. "E. Information requirements. All applicants for a VPA permit shall provide information to the department using the application forms provided by the department."	Revised to read: "E. Information requirements. All applicants for a VPA permit shall provide information to the department using the most current application forms provided by the board."	Added "most current" forms; clarified that forms must be provided by the "board" based on concerns of the SWCB.
9VAC25-32-60 F 1 b	Application for a VPA permit. F 1 b. "Owner contact information."	Revised to include specific information required: F 1 b "Owner contact information including (1) name; (2) mailing address; (3) telephone number; and (4) email address."	Revised to clarify requirements.
9VAC25-32-60 F 1 c	Application for a VPA permit. F 1 c. "A general description of the proposed plan including:"	Revised to read: "A general description of the proposed activity including:"	Revised to clarify requirements.
9VAC25-32-60 F 1 c (1)	Application for a VPA permit. F 1 c (1). "Name and location of generators and owners;"	Revised to read: "Name and location of generators involved and their owners;"	Revised to clarify requirements.
9VAC25-32-60 F 1 c (2)	Application for a VPA permit. F 1 c (2). "Biosolids quality, biosolids treatment and handling processes;"	Revised to read: "Biosolids quality and the generator's biosolids treatment and handling processes;"	Revised to clarify requirements.
9VAC25-32-60 F 1 c (3) (c)	Generator's odor control plan, that contains at minimum: "(c) Methods used to abate malodorous biosolids if delivered to the field, prior to land application; and:	Revised to read: "(c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and:	Revised to clarify requirements and add omitted item.
9VAC25-32-60 F 1 d	"Written permission of landowners and farmers on a form approved by the board and pertinent lease agreements as may be necessary for operation of the treatment works."	Revised to delete reference to "farmers" and to refer to "the most current form approved by the board". Now reads: "Written permission of landowners on the most current form approved by the board and pertinent lease agreements as may be necessary for operation of the treatment works."	Revised to clarify requirements.
9VAC25-32-	"A copy of a letter of	Revised subdivisions	Revised to correct

60 F 1 f	approval of the nutrient management plan for the operation from the Department of Conservation and Recreation if required by subdivision 3 c of this subsection."	reference. Language now reads: "A copy of a letter of approval of the nutrient management plan for the operation from the Department of Conservation and Recreation if required by subdivision 3 b of this subsection."	subdivision reference.
9VAC25-32-60 F 2 a (1)	Design Information. "a. Biosolids characterization...(1) When applying for authorization to land apply a biosolids source not previously included in a VPDES or Virginia Pollution Abatement Permit..."	Revised to read: "a. Biosolids characterization... (1) When applying for authorization to land apply a biosolids source not previously included in a VPDES or VPA Permit..."	Replaced Virginia Pollution Abatement permit with VPA permit to maintain consistent formatting.
9VAC25-32-60 F 2 a (3) (a)	Applicants must provide: "(a) Biosolids analytical data...Existing data may be used in lieu of sampling done solely for the purpose of this application;"	Added statement: Subdivision now reads: "(a) Biosolids analytical data...Existing data may be used in lieu of sampling done solely for the purpose of this application. The department may reduce the number of samples collected based on site specific conditions;"	Revised to clarify requirements.
9VAC25-32-60 F 2 a (4)	"Samples shall be collected and analyzed in accordance with analytical methods specified in EPA SW 846...Samples for PCB analysis shall be collected and analyzed in accordance with EPA Method 1668B; and"	Revised to read: "Samples shall be collected and analyzed in accordance with analytical methods specified in 40 CFR Part 503 (March 26, 2007) and 40 CFR Part 136 (March 26, 2007); and"	Struck EPA SW846 to be consistent with 40 CFR Part 503 which references 40CFR Part 136 and requires specific methods. Struck PCB analysis requirements, since they are included in 40 CFR Part 136 and Method 1668B is not approved for use.
9VAC25-32-60 F 2 b (4)	"(4) Topographic map (10-foot contour preferred) of sufficient detail to clearly shown the following information:"	Revised to read: "(4) Topographic map (10-foot contour preferred) of sufficient detail to clearly shown show the following information:"	Grammatical correction.

<p>9VAC25-32-60 F 2 b (4) (c)</p>	<p>"(c) Drainage ways that may attribute to rainfall run-on to or runoff from this site; and"</p>	<p>Revised to read: "(c) Drainage ways that may attribute to rainfall run-on to or runoff from <u>this</u> the site; and"</p>	<p>Grammatical correction – consistency.</p>
<p>9VAC25-32-60 F 2 b (8)</p>	<p>"Ground water monitoring plans for facilities proposing storage of liquid biosolids or supernatant including pertinent geohydrological data to justify upgradient and downgradient well location and depth."</p>	<p>Replaced "ground water" with "groundwater" and revised subdivision to read: "Groundwater monitoring plans for facilities if required by the department. The groundwater monitoring plan shall include pertinent geohydrological data to justify upgradient and downgradient well location and depth."</p>	<p>Revised to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009. Revised language because regulation requires storage on engineered impervious surfaces.</p>
<p>9VAC25-32-60 F 2 d (1)</p>	<p>Land application sites: "(1) DEQ control number, if previously assigned, identifying each land application field or site and the site's location;"</p>	<p>Revised to include a provision in those cases where a DEQ control number has not been assigned. Subdivision revised to read: "(1) DEQ control number, if previously assigned, identifying each land application field. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location."</p>	<p>Revised to clarify requirements and to include requirements in those case where a DEQ control number has not been assigned.</p>
<p>9VAC25-32-60 F 2 d (2)</p>	<p>Land application sites: "(2) The site's latitude and longitude to the nearest second and the method of determination;"</p>	<p>Revised to read: "(2) The site's latitude and longitude in decimal degrees to three decimal places and the method of determination;"</p>	<p>Changed lat/long units to "in decimal degrees to three decimal places" in keeping with technology.</p>
<p>9VAC25-32-60 F 2 d (3)</p>	<p>Land application sites: "(3) A legible topographic map of proposed application areas to scale as needed to depict the following features..."</p>	<p>Revised to read: "(3) A legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features..."</p>	<p>Added requirement for "aerial photograph, including legend" in keeping with technology and better identify sites and their features, based on field experience.</p>

9VAC25-32-60 F 2 d (3) (g)	"Frequently flooded areas (National Resources Conservation Service (NRCS) designation; and"	Revised to read: "Frequently flooded areas (National Resources Conservation Service (NRCS) designation;"	Revised to account for the addition of a new requirement.
9VAC25-32-60 F 2 d (3) (h)	"(h) The gross acreage of the fields where biosolids will be applied;"	Moved condition to a new subdivision (j) and replaced with: "Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances;"	Added to clarify changes to buffers/setbacks and buffer/setback language in the regulation.
9VAC25-32-60 F 2 d (3) (i)		Added new requirement: "(i) Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and"	Added to clarify changes to buffers/setbacks and buffer/setback language in the regulation.
9VAC25-32-60 F 2 d (3) (j)	9VAC25-32-60 F 2 d (3) (h)	Subdivision renumbered to (j).	Subdivision renumbered to account for the addition of two new requirements.
9VAC25-32-60 F 2 d (5)	"(5) County tax maps for each farm to be included in the permit which may include multiple fields;"	Revised to read: "(5) County tax maps labeled with Tax Parcel ID(s) for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries;"	Added "labeled with Tax ID(s)" to better identify field owners in response to SWCB concerns regarding permit issuance. Added to clarify changes to buffers and buffer language in the regulation.
9VAC25-32-60 F 2 d (7)	"(7) The name, mailing address, and telephone number of the site owner, if different from the applicant;"	Revised to read: "(7) The name, mailing address, and telephone number of each site owner, if different from the applicant;"	Clarified to include information for "each site owner" to address SWCB concerns regarding identification of property owners and permit issuance.
9VAC25-32-60 F 2 d (9)	"(9) <u>Whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such site types are defined in 9VAC25-31-500.</u> "	Replace "9VAC25-31-500" with "9VAC25-32-10". Revised to read: "(9) <u>Whether the site is agricultural land, forest, a public contact site, or a</u>	Corrected reference to refer definition section within same regulation.

		<u>reclamation site, as such site types are defined in [9VAC25-31-5009VAC25-32-10].</u> "	
9VAC25-32-60 F 2 d (11)	"(11) Whether either of the vector attraction reduction options of 9VAC25-32-685 B 9 or B 10 is met at the site..."	Subdivision deleted.	Struck – this is not planned at the time of permit application; these methods are used to address emergency situations; based on comments received.
9VAC25-32-60 F 2 d (12)	"(12) For projects utilizing frequent application of biosolids at agronomic rates the following additional site information will be necessary: (a) Information...(b) Representative soil borings...(c) Additional soil testing...(d) Ground water monitoring plans..."	Subdivision deleted.	Deleted language because land application rates and frequency will be dictated by NMP; agronomic rate annually will not be allowed by an NMP.
9VAC25-32-60 F 2 d (13)	"(13) The following information for each land application site that has been identified..."	Renumbered to (11) and changed reference to Table 2 to "Table 3".	Renumbered due to deletion of previous subdivisions. Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables, oversight in original amendments (5 table reference changes in paragraph).
9VAC25-32-60 F 2 d (14)	"(14) If not all land application sites have been identified... (a) Describes the geographical area...(b) Identifies the site selection...(c) Describes how the site...(d) Provides for advance notice...(e) Provides for advance public notice..."	Deleted requirement.	Deleted Land Application Plan language because notification requirements in statute supersede the addition of land with administrative approval. Based on comments received.
9VAC25-32-60 F 3	"3. A biosolids operations management plan shall be provided..."	Deleted term "operations". Revised to read: "3. A biosolids management plan shall be provided."	Revised term to biosolids management plan throughout regulation

			based on comments received; confusing with the term operations and maintenance Manual.
9VAC25-32-60 F 3 a	"a. Description of operation: A comprehensive, general description of the operation shall be provided, including biosolids source or sources; quantities; flow diagram illustrating treatment works biosolids flows and solids handling units; site description; methodology of biosolids handling for application periods, including storage and nonapplication period storage; and alternative management methods when storage is not provided."	Revised to read: "a. Description of operation: A comprehensive, general description of the operation as required by 9VAC25-32-60.	Replaced with a comprehensive, general description of the operation as required by 9VAC25-32-60.
9VAC25-32-60 F 3 b	"b. A nutrient management plan approved by the Department of Conservation and Recreation shall be required for application sites prior to board authorization..."	Revised to read: "b. A nutrient management plan approved by the Department of Conservation and Recreation as required for application sites prior to board authorization..."	Revised to clarify requirements.
9VAC25-32-60 F 3 b (2)	"(2) Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and"	Delete "and". Revised to read: "(2) Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;"	Revised to account for the addition of a new requirement.
9VAC25-32-60 F 3 b (3)	"(3) Mined land sites where land application is proposed at greater than agronomic rates."	Revised to read "(3) Mined or disturbed land sites where land application is proposed at greater than agronomic rates; <u>or</u> "	Revised language to clarify requirements and to account for inclusion of an additional requirement.
9VAC25-32-60 F 3 b (4)		Added new requirement: "(4) Other sites based on	Revised to clarify requirements. Based

		site-specific conditions that increase the risk that land application may adversely impact state waters.	on comments received.
9VAC25-32-60 F 4 a	Biosolids transport. "(a). Description and specification on the bed or the tank vehicle."	Revised to read: "(a). General description of transport vehicles to be used."	Revised based on comments received.
9VAC25-32-60 F 4 b	"b. Haul routes to be used from the biosolids generator to the storage unit and land application sites."	Delete requirement and replace with 9VAC25-32-60 F 4 c.	Revised based on comments received.
9VAC25-32-60 F 4 b	9VAC25-32-60 F 4 c: "Procedures for biosolids offloading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning); field reclamation and emergency spill notification and cleanup measures."	9VAC25-32-60 F 4 c renumbered to 9VAC25-32-60 F 4 b.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-60 F 4 c	9VAC25-32-60 F 4 d	9VAC25-32-60 F 4 d renumbered to 9VAC25-32-60 F 4 c.	Renumbered to account for deletion of previous subdivisions and renumbering of subdivisions.
9VAC25-32-60 F 5 a (4)	"(4) Field reclamation of offloading (staging) areas."	Revised to read: "(4) Reestablishment of offloading and staging areas."	Revised to clarify requirements.
9VAC25-32-60 F 5 b (3)	"(3) Procedures used to ensure that operations address the following constraints: application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice-covered or snow-covered ground; maintenance of buffer zones; slopes; prohibited access..."	Revised to replace "buffer zones" with "setback distances". Revised to read: "(3) Procedures used to ensure that operations address the following constraints: application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice-covered or snow-covered ground; establishment of setback distances; slopes; prohibited	Revised to clarify requirements; to avoid confusion with "vegetated buffers" and for consistence within the regulations.

		access..."	
9VAC25-32-80 I 6 a	Reporting requirements. 24-hour reporting. "a. The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health. An oral report must be provided as soon as possible, but in no case later than 24 hours..."	Revised to include who the oral report must be provided to. Language now reads: "a. The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health. An oral report must be provided to the department as soon as possible, but in no case later than 24 hours..."	Revised to clarify requirements.
9VAC25-32-100 E	"E. Biosolids land application. Where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation routes..."	Revised to replace "buffering" with "setback distances". Language revised to read: "E. Biosolids land application. Where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding setback distances, transportation routes..."	Revised to clarify requirements; to avoid confusion with "vegetated buffers" and for consistence within the regulations.
9VAC25-32-140 B 3	"3. Following the submission of an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, DEQ shall notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields..."	Revised to refer to "the department" and "making a good faith effort for notification". Revised to read: "3. Following the submission of an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, the department shall make a good faith effort to notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields..."	Revised to clarify requirements. Based on discussions with the AG's Office.
9VAC25-32-140 D	"D. Before issuing any permit, if the department finds that there are localities particularly affected by the permit, the	Replaced "department" with "board". Revised to read: "D. Before issuing any permit, if the board finds that there are localities	Revised for consistency within the regulations and with current policies and procedures..

	department shall:"	particularly affected by the permit, the board shall:"	
9VAC25-32-140 D 2	"Written comments shall be accepted by the department for at least 15 days after any public hearing on the permit, unless the department decides to shorten the period..."	Replaced "department" with "board" and "department decides" with board votes". Revised to read: "Written comments shall be accepted by the board for at least 15 days after any public hearing on the permit, unless the board votes to shorten the period..."	Revised for consistency within the regulations and with current policies and procedures.
9VAC25-32-240 C	"C. An application for any permit amendments to increase the acreage authorized by the permit shall not be considered a minor modification and shall require the public involvement procedures outlined in 9VAC25-32-140 C."	Revised to include reference to the "initial permit" and to clarify that increases of acreage are required to follow certain public participation requirements. Revised to read: "C. An application for any permit amendments to increase the acreage authorized by the initial permit shall require the public involvement procedures outlined in 9VAC25-32-140 C."	Revised to clarify requirements and for consistency within the regulations. Based on discussions with the AG's Office.
9VAC25-32-305 D	"D. No person shall land apply, market or distribute biosolids in Virginia unless the biosolids has been approved by the board."	Revised to include reference to the biosolids "source". Revised to read: "D. No person shall land apply, market or distribute biosolids in Virginia unless the biosolids source has been approved by the board."	Revised to clarify requirements.
9VAC25-32-307 A	"A. Disposal of sewage sludge in a municipal solid waste landfill unit that complies with the requirements in the Virginia Solid Waste Management Regulation (9VAC20-80) constitutes compliance..."	Revised regulation reference from 9VAC20-80 to 9VAC20-81.	Corrected reference error.
9VAC25-32-307 B	"B. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit shall ensure that the sewage sludge	Revised regulation reference from 9VAC20-80 to 9VAC20-81.	Corrected reference error.

	meets the requirements in 9VAC20-80 concerning the quality..."		
9VAC25-32-313 C	"C. No person shall apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 2 to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in 9VAC25-32-356 Table 2 has been reached."	Replaced reference to 9VAC25-32-356 Table 2 with reference to 9VAC25-32-356 Table 3.	Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables, oversight in original amendments. (2 changes in paragraph).
9VAC25-32-313 D	"D. No person shall apply domestic septage to agricultural land, forest, or a reclamation site during a 365-day period if the annual application rate in 9VAC25-32-356 C has been reached during that period."	Replaced reference to 9VAC25-32-356 C with reference to 9VAC25-32-356 D.	Corrected reference to 9VAC25-32-356 D, due to renumbering sections, oversight in original amendments.
9VAC25-32-313 E	"E. The person who prepares bulk biosolids that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk biosolids written notification of the concentration of total nitrogen (as N on a dry weight basis) and phosphorus (as N and P on a dry weight basis) in the bulk biosolids."	Revised to delete reference to total nitrogen (as N on a dry weight basis). Revised to read: "E. The person who prepares bulk biosolids that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk biosolids written notification of the concentration of total nitrogen and phosphorus (as N and P on a dry weight basis) in the bulk biosolids."	Revised to require notification of total nitrogen and phosphorus (as N and P on a dry weight basis) because NMPs may be P based.
9VAC25-32-313 F	General Requirements; where application of biosolids subject to cumulative pollutant loading rates will be applied; references to 9VAC25-32-356 Table 2.	Corrected reference from 9VAC25-32-356 Table 2 to 9VAC25-32-356 Table 3 (2 changes in paragraph).	Revised due to renumbering tables, oversight in original amendments.
9VAC25-32-313 F 1	"1. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 2	Revised to correct reference from 9VAC25-32-356 Table 2 to 9VAC25-32-356 Table 3 and revised to correct	Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables,

	has not been applied to the site since July 20, 1993, the cumulative amount of each pollutant listed in 9VAC25-32-356 Table 2 may be applied to the site in accordance with 9VAC25-32-356 A 2 a."	reference from 9VAC25-32-356 A 2 a to B 2 a.	oversight in original amendments. Corrected reference to 9VAC25-32-356 B, due to renumbering tables, oversight in original amendments.
9VAC25-32-313 F 2	"2. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 2 has been applied...to determine the additional amount of each pollutant that can be applied to the site in accordance with 9VAC25-32-356 A 2 a."	Revised to correct reference from 9VAC25-32-356 Table 2 to 9VAC25-32-356 Table 3 and revised to correct reference from 9VAC25-32-356 A 2 a to B 2 a.	Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables, oversight in original amendments. Corrected reference to 9VAC25-32-356 B, due to renumbering tables, oversight in original amendments.
9VAC25-32-313 F 3	"2. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 2 has been applied...an additional amount of each pollutant shall not be applied to the site in accordance with 9VAC25-32-356 A 2 a."	Revised to correct reference from 9VAC25-32-356 Table 2 to 9VAC25-32-356 Table 3 and revised to correct reference from 9VAC25-32-356 A 2 a to B 2 a.	Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables, oversight in original amendments. Corrected reference to 9VAC25-32-356 B, due to renumbering tables, oversight in original amendments.
9VAC25-32-313 K	"K. Any person who applies bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the land shall provide written notice..."	Revised to correct reference from 9VAC25-32-356 Table 2 to 9VAC25-32-356 Table 3.	Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables, oversight in original amendments.
9VAC25-32-315 B	"B. Nothing in this part precludes another state agency with responsibility for regulating biosolids or sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use of biosolids or disposal of	Revised to read: "Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge."	Statute gives local government specific authority; it cannot be more stringent than this regulation – revised language to clarify.

	sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use of biosolids or disposal of sewage sludge."		
9VAC25-32-315 C	"C. For biosolids land application where, because of site specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation routes..."	Replaced "buffering" with "setback distances". Revised to read: "C. For biosolids land application where, because of site specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding setback distances, transportation routes..."	Revised to clarify requirements; to avoid confusion with "vegetated buffers" and for consistence within the regulations.
9VAC25-32-317 B	"B. Selection of a use or a disposal practice. This part does not require the selection of a biosolids use or sewage sludge disposal practice. The determination of the manner in which biosolids is used or sewage sludge is disposed is a local determination."	Revised to read: "B. Selection of a use or disposal practice. This part does not dictate the selection of a specific biosolids use or sewage sludge disposal practice by the owner of the wastewater treatment works."	Revised language to clarify requirements. Based on comments received.
9VAC25-32-330 E 1	"1. The board may grant the variance request and if the board proposes to deny the variance it shall provide the owner the opportunity to an informal hearing as provided in § 2.2-4019 of the Code of Virginia. Following this opportunity for an informal hearing the board may reject any application for a variance by sending a rejection notice to the applicant. The rejection notice shall be in writing and shall state the reasons for the rejection. A rejection notice	Replace the term "hearing" with "proceeding" twice in the subdivision. Revise to read: "1. The board may grant the variance request and if the board proposes to deny the variance it shall provide the owner the opportunity to an informal [hearing proceeding] as provided in § 2.2-4019 of the Code of Virginia. Following this opportunity for an informal [hearing proceeding] the board may reject any application for a variance by sending a rejection notice to the applicant. The rejection	Correct terminology to conform to statute (2.2-4019 of the Code of Virginia).

	constitutes a case decision."	notice shall be in writing and shall state the reasons for the rejection. A rejection notice constitutes a case decision."	
9VAC25-32-356	Pollutant limits.	Revised title of section to: "Pollutant monitoring and limits".	Renamed to more accurately describe contents.
9VAC25-32-356 A	"Biosolids."	Moved subsection entitled "biosolids" to a new subsection B.	Moved to account for addition of new materials related to bulk biosolids or biosolids sold or given away in a bag.
9VAC25-32-356 A		Replaced original subsection A materials with: "Bulk biosolids or biosolids sold or given away in a bag or other container shall be monitored for the parameters identified in Table 1 of this section."	Revised to include monitoring parameters that had been excluded.
9VAC25-32-356 A – Table 1		Added new Table 1 – Parameters for Biosolids Analysis with the following pollutants listed: Percent solids (%); Volatile solids (%); pH (standard units); Total Kjeldahl nitrogen (%); Ammonia nitrogen (%); Nitrates (mg/kg); Total phosphorus (%); Total potassium (%); Alkalinity as CaCO ₃ (mg/kg); Arsenic (mg/kg); Cadmium (MG/kg); Copper (mg/kg); Lead (mg/kg); Mercury (mg/kg); Molybdenum (mg/kg)' Nickel (mg/kg); Selenium (mg/kg); and Zinc (mg/kg) with associated footnotes (1) Values reported on a dry weight basis unless indicated and (2) Lime treated biosolids (10% or more lime by weight) shall be analyzed for percent CaCO ₃ .	Table added to include monitoring parameters that had been excluded.
9VAC25-32-356 B	"A. Biosolids."	Revised section number and title to read: "B. Biosolids	Revised to clarify requirements.

		pollutant limits."	
9VAC25-32-356 B 1	"1. Bulk biosolids or biosolids sold or given away in a bag...exceeds the ceiling concentration for the pollutant in Table 1 of this section."	Corrected table reference. Revised to read: "1. Bulk biosolids or biosolids sold or given away in a bag...exceeds the ceiling concentration for the pollutant in Table 2 of this section."	Corrected reference to Table 2 due additions of a new table and to renumbering of existing tables.
9VAC25-32-356 B 2 a	"a. The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of this section; or"	Corrected table reference. Revised to read: "a. The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 3 of this section; or"	Corrected reference to Table 3 due additions of a new table and to renumbering of existing tables.
9VAC25-32-356 B 2 b	"b. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 3 of this section."	Corrected table reference. Revised to read: "b. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section."	Corrected reference to Table 4 due additions of a new table and to renumbering of existing tables.
9VAC25-32-356 B 3	"3. If bulk biosolids is applied to a lawn or a home garden, the concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 3 of this section."	Corrected table reference. Revised to read: "3. If bulk biosolids is applied to a lawn or a home garden, the concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section."	Corrected reference to Table 4 due additions of a new table and to renumbering of existing tables.
9VAC25-32-356 B 4 a	"a. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 3 of this section; or"	Corrected table reference. Revised to read: "a. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section; or"	Corrected reference to Table 4 due additions of a new table and to renumbering of existing tables.
9VAC25-32-356 B 4 b	"b. The product of the concentration of each pollutant in the biosolids and the annual whole sludge application rate for the biosolids shall not cause the annual pollutant	Corrected table reference. Revised to read: "b. The product of the concentration of each pollutant in the biosolids and the annual whole sludge application rate for the biosolids shall	Corrected reference to Table 5 due additions of a new table and to renumbering of existing tables.

	loading rate for the pollutant in Table 4 of this section to be exceeded..."	not cause the annual pollutant loading rate for the pollutant in Table 5 of this section to be exceeded..."	
9VAC25-32-356 C	9VAC25-32-356 B. Pollutant concentrations and loading rates – biosolids.	Revised subsection number to 9VAC25-32-356 C.	Revised to account for the addition of new subsection.
9VAC25-32-356 C – Table 2	9VAC25-32-356 B - Table 1.	Renumbered to 9VAC25-32-356 C - Table 2.	Corrected Table number due to addition of a new table.
9VAC25-32-356 C – Table 2 Footnote (1)	" ⁽¹⁾ Biosolids with a molybdenum concentration greater than 40 mg/kg shall not be applied to land used for livestock grazing."	Deleted footnote and associated footnote reference.	Based on comments received.
9VAC25-32-356 C – Table 3	9VAC25-32-356 B - Table 2.	Renumbered to 9VAC25-32-356 C – Table3.	Corrected Table number due to addition of a new table.
9VAC25-32-356 C – Table 3 – Footnote (2)	" ⁽²⁾ The maximum cumulative application is currently under study by USEPA."	Added to footnote (2) regarding Molybdenum research. Revised to read: ⁽²⁾ The maximum cumulative application is currently under study by USEPA. Research suggests that for Molybdenum a cumulative pollutant loading rate below 40 kg/hectare may be appropriate to reduce the risk of copper deficiency in grazing animals."	Based on comments received.
9VAC25-32-356 C – Table 4	9VAC25-32-356 B - Table 3.	Renumbered to 9VAC25-32-356 C - Table 4.	Corrected Table number due to addition of a new table.
9VAC25-32-356 C – Table 4 – Footnote (1)	" ⁽¹⁾ The monthly average concentration is currently under study by USEPA."	Added to footnote (1) information about Molybdenum research. Revised to read: " ⁽¹⁾ The monthly average concentration is currently under study by USEPA. Research suggests that a monthly average Molybdenum concentration below 40 mg/kg may be	Based on comments received.

		appropriate to reduce the risk of copper deficiency in grazing animals."	
9VAC25-32-356 C – Table 5	9VAC25-32-356 B - Table 4.	Renumbered to 9VAC25-32-356 C - Table 5.	Corrected Table number due to addition of a new table.
9VAC25-32-356 C – Table 5	9VAC25-32-356 B - Table 4.	Insert Footnote (1) designation in Table Header – "ANNUAL POLLUTANT LOADING RATES ⁽¹⁾ ".	Omission in tables – footnotes should be the same footnote designations as in Table 3 – CUMULATIVE POLLUTANT LOADING RATES.
9VAC25-32-356 C – Table 5	9VAC25-32-356 B - Table 4.	Insert Footnote (2) designation associated with pollutant "Arsenic ⁽²⁾ ".	Omission in tables – footnotes should be the same footnote designations as in Table 3 – CUMULATIVE POLLUTANT LOADING RATES.
9VAC25-32-356 D	"C. Procedures to determine the annual whole sludge application rate for biosolids. Subdivision A 4 b of this section...the annual pollutant loading rate in Table 4 to be exceeded...the annual pollutant loading rates (APLR) in Table 4 of this section to be exceeded."	Renumbered subsection from "C" to "D"; revised subdivision reference from A 4 b to B 4 b and revised table reference from "Table 4" to "Table 5" (2 times in subsection).	Corrected subsection numbering due to addition of new subsection and corrected Table references to account for the addition of a new table.
9VAC25-32-356 D 3 b	"b. Using the pollutant concentrations from subdivision 3 a of this subsection and the APLRs from Table 4 of this section..."	Revised table reference. Subdivision now reads: "b. Using the pollutant concentrations from subdivision 3 a of this subsection and the APLRs from Table 5 of this section..."	Corrected Table references to account for the addition of a new table.
9VAC25-32-358 A 1	"1. The frequency of monitoring for the pollutants listed in Tables 1 through 4 of 9VAC25-32-356..."	Corrected table references. Revised to read: "1. The frequency of monitoring for the pollutants listed in Tables 1 through 5 of 9VAC25-32-356..."	Corrected Table references to account for the addition of a new table in section.
9VAC25-32-	"2. After the biosolids has	Delete last	Statement removed

358 A 2	been monitored for two years at the frequency in Table 1 of this section, the board may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in 9VAC25-32-675 A 5 b and c. In no case shall the frequency be reduced to less than once per year in any year that biosolids are applied to land."	sentence/condition. Revised to read: "2. After the biosolids has been monitored for two years at the frequency in Table 1 of this section, the board may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in 9VAC25-32-675 A 5 b and c."	for consistency – the decision would be made by DEQ.
9VAC25-32-359 A 1	"1. If the pollutant concentrations in Table 3 of 9VAC25-32-356..."	Corrected table reference. Revised to refer to Table 4: "1. If the pollutant concentrations in Table 4 of 9VAC25-32-356..."	Corrected Table reference to account for the addition of a new table in section.
9VAC25-32-359 A 1 a (1)	"(1) The concentration of each pollutant listed in Table 3 of 9VAC25-32-356..."	Corrected table reference. Revised to refer to Table 4: "(1) The concentration of each pollutant listed in Table 4 of 9VAC25-32-356..."	Corrected Table reference to account for the addition of a new table in section.
9VAC25-32-359 A 2	"2. If the pollutant concentrations in 9VAC25-32-356 Table 3..."	Corrected table reference. Revised to refer to Table 4: "2. If the pollutant concentrations in 9VAC25-32-356 Table 4..."	Corrected Table reference to account for the addition of a new table in section.
9VAC25-32-359 A 2 a (1)	"(1) The concentration of each pollutant listed in Table 3 of 9VAC25-32-356..."	Corrected table reference. Revised to refer to Table 4: "(1) The concentration of each pollutant listed in Table 4 of 9VAC25-32-356..."	Corrected Table reference to account for the addition of a new table in section.
9VAC25-32-359 A 3	"3. If the requirements in 9VAC25-32-356 A 2 are met..."	Corrected subdivision reference. Revised to read: "3. If the requirements in 9VAC25-32-356 B 2 are met..."	Corrected subdivision reference to account for the addition of a new subsection.
9VAC25-32-359 A 3 a (1)	"(1) The concentration of each pollutant listed in Table 1 of 9VAC25-32-356..."	Corrected table reference. Revised to refer to Table 2: "(1) The concentration of each pollutant listed in Table 2 of 9VAC25-32-356..."	Corrected Table reference to account for the addition of a new table in section.
9VAC25-32-359 A 3 b (4)	"(4) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of 9VAC25-32-356..."	Corrected table reference. Revised to refer to Table 3: "(4) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 3	Corrected Table reference to account for the addition of a new table in section.

		of 9VAC25-32-356..."	
9VAC25-32-359 A 3 b (5)	"(5) The amount of biosolids (i.e., metric tons) applied to each site;"	Revised to say "dry metric tons": "(5) The amount of biosolids (i.e., dry metric tons) applied to each site;"	Revised to say dry metric tons. Based on comments received.
9VAC25-32-359 A 3 b (6)	"(6) The following certification statement: "I certify...information in 9VAC25-32-313 F 2 was prepared for each sites on which bulk biosolids is applied..."	Revised to say: "(6) The following certification statement: "I certify...information in 9VAC25-32-313 F 2 was prepared for each sites <u>site</u> on which bulk biosolids is applied..."	Grammatical correction: Deleted "sites" and inserted "site".
9VAC25-32-359 B 4	"4. The nitrogen requirement for the crop or vegetation grown on each site during the 365-day period;"	Revised to added "phosphorus". Revised to read: "4. The nitrogen and phosphorus requirement for the crop or vegetation grown on each site during the 365-day period;"	Added phosphorus to the requirement because NMPs may be P based.
9VAC25-32-360 A	"A. An activity report shall be submitted (electronically or postmarked) to the department by the 15 th day of the month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4 following any month in which land application occurs. The report shall indicate those sites where land application activities took place during the previous month."	Revised to read: "A. An activity report shall be submitted (electronically or postmarked) to the department by the 15 th day of each month for land application activity that occurred in the previous calendar month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4. The report shall indicate those sites where land application activities took place during the previous month. If no land application occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred."	Revised to be consistent with changes made in the Fee Regulation.
9VAC25-32-360 B 2	"2. The information in 9VAC25-32-359 A 3 b (1) through (7) when 90% or more of any of the cumulative pollutant loading rates in Table 2 of 9VAC25-32-356 is	Revised to correct Table number reference from Table 2 to "Table 3". Revised to read: "2. The information in 9VAC25-32-359 A 3 b (1) through (7) when 90% or more of any of	Corrected Table reference to account for the addition of a new table in section.

	reached at a land application site."	the cumulative pollutant loading rates in Table 3 of 9VAC25-32-356 is reached at a land application site."	
9VAC25-32-360 C	"C. Biosolids application rates shall be calculated using the results from sampling and analysis completed during the most recent 12 months of monitoring. For proposed treatment works, rates may be initially based on the biosolids characteristics produced by similar generating facilities."	Delete requirement and replace with language of 9VAC25-32-360 D.	Based on comments received.
9VAC25-32-360 C	9VAC25-32-360 D: "Reports shall be maintained documenting the required treatment and quality characteristics and the maximum allowable land application loading rates..."	Renumbered 9VAC25-32-360 D to 9VAC25-32-360 C.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-360 D	9VAC25-32-360 E: The generator and owner shall maintain the records for a minimum of five years..."	Renumbered 9VAC25-32-360 E to 9VAC25-32-360 D.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-400 A	"A. The department may require that additional site specific monitoring be performed...Such requirements may occur in situations in which ground water contamination...Additional monitoring may include, but is not limited to, ground water, surface water..."	Replaced "ground water" with "groundwater" (2 times in subsection).	Revised to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32-400 D	"D. The department may require biosolids to be tested for certain toxic organic compounds prior to agricultural use (Table 1 of 9VAC25-32-570)..."	Delete reference to Table 1. Revised to read: "D. The department may require biosolids to be tested for certain toxic organic compounds prior to agricultural use."	Revised based on comments received.
9VAC25-32-	"E. Additional parameters	Revised to replace	Grammatical

400 E	may be required for screening purposes such as aluminum (mg/kg), water soluble boron (mg/kg)..."	"soluable" with "soluble". Revised to read: "E. Additional parameters may be required for screening purposes such as aluminum (mg/kg), water soluble boron (mg/kg)..."	correction.
9VAC25-32-400 F	"F. Microbiological testing may be necessary to document the sludge treatment classification (9VAC25-32-675). Microbiological standards shall be verified by the log mean of the analytical results from testing of nine or more samples of the sludge source..."	Corrected reference to seven samples instead of nine. Revised to read: "F. Microbiological testing may be necessary to document the sludge treatment classification (9VAC25-32-675). Microbiological standards shall be verified by the log mean of the analytical results from testing of seven or more samples of the sludge source..."	Corrected to collect seven representative samples to be consistent with VPDES and 503 based on comment.
9VAC25-32-410	Operations management plan.	Revised title of section to: "Biosolids management plan."	Revised based on comments received; confusing with the term operations and maintenance Manual.
9VAC25-32-410 A	"A. The permit holder shall maintain an operations management plan that shall consist of three components:"	Revised to read: "A. The permit holder shall maintain and implement a Biosolids Management Plan that shall consist of three components:"	Revised based on comments received; confusing with the term operations and maintenance Manual. Clarified that biosolids management plant shall be maintained and implemented.
9VAC25-32-410 A 2	"2. Nutrient management plan for each site in accordance with 9VAC25-32-560; and"	Revised to read: "2. Nutrient management plan developed for each site prior to biosolids application; and"	Clarified language and removed reference to 9VAC25-32-560 because NMP requirements in 560 were all moved to 410 C. to consolidate to one location.
9VAC25-32-410 B	"B. The O&M manual shall include at a minimum:"	Moved the original language from "B" to a new subdivision "D".	Moved to accommodate the insertion of new requirements.

<p>9VAC25-32-410 B</p>		<p>Added new language: "B. The biosolids management plan and all of its components shall be incorporated as an enforceable part of the permit."</p>	<p>Added based on comments from DEQ Enforcement Division.</p>
<p>9VAC25-32-410 C</p>		<p>Added new language: "C. Nutrient management plan:"</p>	<p>NMP requirements in 560 were all moved to 410 C. to consolidate to one location. To clarify requirements for nutrient management plans as they relate to biosolids applications. - Based on comments received.</p>
<p>9VAC25-32-410 C 1</p>		<p>Added new language: "1. A nutrient management plan approved by the Department of Conservation and Recreation shall be required for application sites prior to board authorization under specific conditions, including but not limited to:"</p>	<p>Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.</p>
<p>9VAC25-32-410 C 1 a</p>		<p>Added new language: "a. sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;"</p>	<p>Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.</p>
<p>9VAC25-32-410 C 1 b</p>		<p>Added new language: "b. sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;"</p>	<p>Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. -</p>

			Based on comments received.
9VAC25-32-410 C 1 c		Added new language: "c. mined or disturbed land sites where land application is proposed at greater than agronomic rates; and"	Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
9VAC25-32-410 C 1 d		Added new language: "d. other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters;"	New language added to be consistent with other sections of the regulations.
9VAC25-32-410 C 1 e		Added new language: "e. Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site."	New language added to clarify that approved NMP is needed anytime these conditions exist.
9VAC25-32-410 C 2		Added new language: "2. The nutrient management plan shall be available for review by the department at the land application site during biosolids land application."	Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
9VAC25-32-410 C 3		Added new language: "3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the nutrient management plan to the farm operator of the site, the Department of Conservation and Recreation and the chief	Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments

		executive officer or designee for the local government, unless they request in writing not to receive the nutrient management plan."	received.
9VAC25-32-410 C 4		Added new language: "4. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for application sites where the soil test phosphorus levels exceed the values in Table 1 of this section. For purposes of approval, permittees should submit the nutrient management plan to the Department of Conservation and Recreation at least 30 days prior to the anticipated date of land application to ensure adequate time for the approval process."	Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
9VAC25-32-410 C 4 - Table 1		Added new table: "Table 1 - Soil Phosphorus Levels Requiring NMP Approval" Table contains soil phosphorus levels based on the VPI & SU Test (Mehlich I) for the Eastern Shore and Lower Coastal Plain Regions (135 ppm); the Middle and Upper Coastal Plain and Piedmont Regions (136 ppm); and the Ridge and Valley Regions (162 ppm). The table also includes a footnote that specifies that: "If results are from another laboratory, the Department of Conservation and Recreation approved conversion factors must be used.	Table moved from 9VAC25-32-560 A 1 - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
9VAC25-32-410 D	"9VAC25-32-410 B. The O&M manual shall include at a minimum:"	Moved the original language from "B" to a new subdivision "D". Subdivision	Moved to accommodate the insertion of new

		now reads: "D. The O&M manual shall include at a minimum:"	requirements.
9VAC25-32-460 A	"A. Soil shall be sampled and analyzed prior to biosolids application to determine site suitability and to provide background data. Soil shall be sampled and analyzed in accordance with Table 1 of this section. Reduced monitoring may apply for typical agricultural utilization projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (see Table 1)..."	Revised to read: "A. Soil shall be sampled and analyzed prior to biosolids. No sample analysis used to determine application rates shall be more than 3 years old at the time of biosolids land application. Soil shall be sampled and analyzed in accordance with Table 1 of this section..."	Revised to clarify requirements and because Table 1 was restructured to eliminate application methods. Based on comments received and to clarify that soil samples were to be no more than 3 years old.
9VAC25-32-460 A - Table 1	Table 1 - Soil Test Parameters for Land Application Sites	<p>Deleted Table 1 categories and listed the parameters that are required for all application rates.</p> <p>Also deleted the use of the category for "supernatant.</p> <p>Deleted the nitrate from the list of parameters.</p> <p>Deleted hydraulic conductivity from the list of parameters.</p> <p>Renumbered the original footnotes.</p> <p>Deleted original footnotes 2; 3; and 4.</p> <p>Renumbered original footnote 5 to footnote 2 and deleted the Bray method.</p> <p>Renumbered footnote 6 to footnote 3.</p> <p>Table 1 Soil Test</p>	<p>Supernatant is not related to soil and is considered a biosolids and follows monitoring parameters.</p> <p>Nitrate is not a parameter typically monitored in the soil.</p> <p>Hydraulic conductivity is a parameter associated with supernatant only.</p> <p>Footnotes deleted and or renumbered due to deletions in the table.</p>

		Parameters for Land Application Sites ¹ now includes the following parameters: Soil ph (Std. Units); Available phosphorus (ppm) ² ; Extractable potassium (ppm); Extractable sodium (mg/100g) ³ ; Extractable calcium (mg/100g); Extractable magnesium (mg/100g); Zinc (ppm); and Manganese (ppm) with the associated footnotes: ¹ Note: Unless otherwise stated, analyses shall be reported on a dry weight basis; ² Available P shall be analyzed using one of the following methods: Mehlich I or Mehlich III; ³ Extractable sodium shall be analyzed only where biosolids known to be high in sodium will be land applied.	
9VAC25-32-480	"Ground water monitoring and reporting.	Revised to read: "Groundwater monitoring and reporting."	Revised to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32-480 A	"A. Monitoring wells may be required by the board for land treatment sites, sludge lagoons, or biosolids land application sites, or biosolids storage facilities to monitor ground water quality."	Revised to replace "ground water" with "groundwater". Revised to read: "A. Monitoring wells may be required by the board for land treatment sites, sludge lagoons, or biosolids land application sites, or biosolids storage facilities to monitor groundwater quality."	Revised to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32-480 B	"B. If ground water monitoring is required, a ground water monitoring plan shall be submitted to	Revised to replace "ground water" with "groundwater" (2 times in subsection). Revised to read: "B. If	Revised to be consistent with VPDES and in accordance with

	the department for approval that includes at a minimum:"	groundwater monitoring is required, a groundwater monitoring plan shall be submitted to the department for approval that includes at a minimum:"	USGS Office of Groundwater Technical Memorandum dated March 26, 2009.
9VAC25-32-490	"Guidelines set forth in 9VAC25-32-500 through 9VAC25-32-660 of this regulation specify minimum standards for biosolids use for land application..."	Revise section references. Revised to read: "Guidelines set forth in 9VAC25-32-515 through 9VAC25-32-580 of this regulation specify minimum standards for biosolids use for land application..."	Added section to regulatory action as a result of other changes in the regulations that required clarification of this section. Section references revised due to repealing 9VAC25-32-500 and to provide clarification of pertinent sections of the regulations specifying the minimum standards for biosolids use for land application.
9VAC25-32-490	"Guidelines set forth...However, the board may impose standards and requirements that are more stringent than those contained in this regulation when required to protect public health or prevent nuisance conditions from developing either within critical areas, or when special conditions develop prior to or during biosolids use operations...Conformance to local land use..."	Deleted language and inserted specific section references. Revised to read: "Guidelines set forth...However, the board may impose standards and requirements that are more stringent than those contained in this regulation according to the provisions of 9VAC25-32-100 E, 9VAC25-32-315, and 9VAC25-32-560 B 3...Conformance to local land use..."	Revised to be consistent with changes made in the regulations and to clarify requirements
9VAC25-32-490	"...Justification for biosolid use proposals..."	Replace "biosolid" with "biosolids".	Revised to use consistent terminology throughout the regulations.
9VAC25-32-500	"Biosolids management.	Repeal section.	All components of biosolids management are

			covered more clearly in 9VAC25-32-410. Revised to eliminate redundancy and to clarify the requirements.
9VAC25-32-515 A 1	"1. At least 100 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the chief executive officer or designee for the local government where the site is located..."	Added the phrase "the first". Revised to read: "1. At least 100 days prior to commencing the first land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the chief executive officer or designee for the local government where the site is located..."	Added language to clarify that this is a one-time notification.
9VAC25-32-515 A 1	"...This requirement may be satisfied by providing a list of available permitted sites in the locality at least 100 days prior to commencing the application at any site on the list..."	Added language. Revised to read: "...This requirement may be satisfied by the department's notice to the local government at the time of receiving the permit application if all necessary information is included in the notice or by providing a list of available permitted sites in the locality at least 100 days prior to commencing the application at any site on the list..."	This addition was based on TAC discussions and comments received and may provide longer notice since the permit processing time may be up to 180 days.
9VAC25-32-515 A 2	"2. At least 14 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located."	Added language. Revised to read: "2. At least 14 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located unless they request in writing not to receive the notice. The notice shall identify the	Based on TAC discussions.

		location of the permitted site and the expected sources of the biosolids to be applied to the site."	
9VAC25-32-515 A 2	"...The notice shall include the following..."	Deleted requirements and returned to statutory language. Moved the requirements to a new requirement for 5-day signage notice.	Based on TAC discussions and comments received.
9VAC25-32-515 A 3	"3. The permittee shall deliver or cause to be delivered daily notification to the department and the chief executive officer of designee for the local government where the site is located prior to commencing planned land application activities."	Revised to read: "3. Not more than 24 hours prior to commencing land application activities, including delivery of biosolids to a permitted site, the permittee shall notify in writing the department and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. This notification shall include identification of the biosolids source and shall include only sites where land application activities will commence within 24 hours or where biosolids will be staged within 24 hours."	Revised to clarify requirements. Revisions based on comments received and on TAC discussions.
9VAC25-32-515 B 1	"1. At least five business days prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post signs at the site that comply with this section, are visible and legible from the public right-of-way in both directions of travel, and conform to the specifications herein. The sign shall remain in place for at least five business days after land application has been completed at	Add statement regarding removal of the sign by the permit holder. Revised to read: "1. At least five business days prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post signs at the site that comply with this section, are visible and legible from the public right-of-way in both directions of travel, and conform to the specifications herein. The sign shall remain in place for at least five business days	Revised to clarify requirements and to conform to the public access restrictions. Based on SWCB actions.

	the site."	after land application has been completed at the site. <u>The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site.</u> "	
9VAC25-32-515 B 1 a		Added new requirement as item "a". New language reads: "a. A sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site used by biosolids transport vehicles."	Based on comments received.
9VAC25-32-515 B 1 a	"a. If the site is located adjacent to a public right-of-way, signs shall be posted along each road frontage beside the field to be land applied."	Renumbered and revised to read: "b. If the field is located adjacent to a public right-of-way, at least one sign shall be posted along each public road frontage beside the field to be land applied."	Renumbered based on addition of new requirement and revised based on comments received.
9VAC25-32-515 B 1 b	"b. If the site is not located adjacent to a public right-of-way, the sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site."	Deleted subdivision. Replaced with new item "b".	Based on comments received.
9VAC25-32-515 B 1 c	"c. The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or to be consistent with local government ordinances and other requirements regulating the use of signs."	Revised to read: "c. The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or where requirements conflict with local government ordinances and other requirements regulating the use of signs."	Revised based on comments received.
9VAC25-32-515 B 2		Added new requirement: "2. Upon the posting of signs at a land application site prior to commencing land application, the permittee	Language moved from the 14 day notification requirements and revised based on

		<p>shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. Notification shall be delivered to the department within 24 hours of the posting of signs. The notice shall include the following:</p> <ul style="list-style-type: none"> a. The name and telephone number of the permit holder, including the name of a representative knowledgeable of the permit; b. Identification by tax map number and the DEQ control number for sites on which land application is to take place; c. The name or title and telephone number of at least one individual designated by the permit holder to respond to questions and complaints related to the land application project, if not the permit holder identified in 9VAC25-32-515 B 2 a; d. The approximate dates on which land application is to begin and end at the site; and e. The name, address and telephone number of the wastewater treatment facility, or facilities, from which the biosolids will originate, including the name or title of a representative of the treatment facility that is knowledgeable about the land application operation." 	<p>comments received.</p>
9VAC25-32-	9VAC25-32-515 B 2	Renumbered subdivision to	Renumbered due to

515 B 3		"B 3".	inserting additional subdivision.
9VAC25-32-515 B 3 b	"b. The name and telephone number of the permit holder and the name or title and telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and"	Subdivision revised and broken into multiple subdivisions. Subdivision b now reads: "b. The name of the permit holder;	Revised to clarify requirements.
9VAC25-32-515 B 3 c	"b. The name and telephone number of the permit holder and the name or title and telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and"	New subdivision c reads: "c. The telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and	Revised to clarify requirements.
9VAC25-32-515 B 3 d	"c. Contact information for the department, including a telephone number for complaints and inquiries."	Renumbered to subdivision "d".	Renumbered to account for the insertion of a new subdivision number.
9VAC25-32-515 B 4	"B 3"	Renumbered to subdivision "B 4".	Renumbered to account for the insertion of a new subdivision.
9VAC25-32-530 B 2	"2. A written agreement shall be established between the landowner and permit applicant or permit holder, whereby the landowner shall consent to apply biosolids on his property and certify that no concurrent agreements exist for the fields to be permitted. The landowner agreement shall include an acknowledgement by the landowner of any site restrictions identified in the permit. The responsibility for obtaining and maintaining the agreements lies with the permit holder. The written agreement shall be	Revised to read: "2. A written agreement shall be established between the landowner and permit applicant or permit holder, to be submitted with the permit application, whereby the landowner shall consent to apply biosolids on his property. The landowner agreement shall include:"	Revisions based on comments received and on SWCB request.

	submitted to the department with the permit application."		
9VAC25-32-530 B 2 (a)		Added new requirement: "(a) A statement certifying that the landowner is the sole owner or one of multiple owners of the property or properties identified on the landowner agreement;"	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 2 (b)		Added new requirement: "(b) A statement certifying that no concurrent agreements are in effect for the fields to be permitted for biosolids application;"	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 2 (c)		Added new requirement: "(c) An acknowledgement that the landowner shall notify the permittee when land is sold or ownership is transferred;"	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 2 (d)		Added new requirement: "(d) An acknowledgement that the landowner shall notify the permittee if any conditions changes such that any component of the landowner agreement becomes invalid;"	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 2 (e)		Added new requirement: "(e)Permission to allow department staff on the landowner's property to conduct inspections;";"	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 2 (f)		Added new requirement: "(f) An acknowledgement by the landowner of any site restrictions identified in the regulation; and"	Revisions based on comments received and on SWCB request. Delete "and" to account for an additional requirement. Based on SWCB actions.
9VAC25-32-530 B 2 (g)		Added new requirement: "(g) An acknowledgement that the landowner has received a biosolids fact sheet approved by the department; and"	Revisions based on comments received and on SWCB request. Delete "period" and insert a "semicolon" and the

			word "and" to account for an additional requirement. Based on SWCB actions.
9VAC25-32-530 B 2 (h)		Add new requirement regarding removal of signs by the landowner. New language: "(h) An acknowledgement that the landowner shall not remove notification signs placed by the permit holder."	New language added to clarify requirements. Based on SWCB actions.
9VAC25-32-530 B 3	"3. New landowner agreements shall be submitted to the department with each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids."	Revised to read: "3. New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids."	Revisions based on comments received and on SWCB request.
9VAC25-32-530 B 4		Added new subdivision B 4: "For permits modified in order to incorporate changes to this regulation, the permit holder shall, within 60 days of the effective date of the permit modification, advise the landowner by certified letter of the requirement to provide a new landowner agreement. The letter shall include instructions to the landowner for signing and returning the new landowner agreement, and shall advise the landowner that the permit holder's receipt of such new landowner agreement is required prior to application of biosolids to the landowner's property."	Revisions based on comments received and on SWCB request. Use of "certified" maintains consistent language with the type of mail service required in the final regulation in the financial responsibility sections. Certified mail is consistent with the type of service required to mail out permits, consistent with the regulatory requirements for CAFOs to file certain notices; and there is no place in any other DEQ statute or other

			regulations that require anything beyond certified mail.
9VAC25-32-530 B 5	Part of 9VAC25-32-530 B 2: "The responsibility for obtaining and maintaining the agreements lies with the permit holder. The written agreement shall be submitted to the department with the permit application."	Renumbered and included as new 9VAC25-32-530 B 5.	Reorganized to clarify requirements.
9VAC25-32-540 A	Transport. "A. Transport routes should follow primary highways...The minimum information for biosolids transport that shall be supplied in the biosolids operations management plan is listed in 9VAC25-32-60 F."	Revised to delete the term "operations". Revised to read: "A. Transport routes should follow primary highways...The minimum information for biosolids transport that shall be supplied in the biosolids management plan is listed in 9VAC25-32-60 F."	Revised based on comments received; confusing with the term operations and maintenance Manual.
9VAC25-32-540 D	"D. The permit holder shall promptly report offsite spills to the Virginia Department of Environmental Quality, the chief..."	Replaced "Virginia Department of Environmental Quality" with "department". Revised to read: "D. The permit holder shall promptly report offsite spills to the department, the chief..."	Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-32-545 A	"A. Staging of biosolids shall not commence unless the field meets the requirements for land application.	Deleted statement and replaced with a description of staging. Revised to read: "A. Staging is the placement of biosolids on a permitted land application field, within the land application area, in preparation for commencing land application or during an ongoing application, at the field or an adjacent permitted field. Staging is not considered storage and shall not take the place of storage."	Based on comments received. Needed to provide a definition of staging.
9VAC25-32-545 B 1	"1. Biosolids that have been staged for greater than seven days shall be spread as soon as field conditions become	Requirement reworded and moved to "B 2". New language added to "B 1". "1. Staging of biosolids shall not commence unless the field	This statement was moved from original Subsection A and reworded to clarify the requirements.

	favorable for land application or removed from the field;"	meets the requirements for land application in accordance with Part IX of this regulation and field conditions are favorable for land application."	
9VAC25-32-545 B 2	"2. No liner or cover is required under or over staged biosolids if spread within 14 days;"	Requirement deleted. Replaced with reworded requirement from original "B 1". Subdivision now reads: "2. Biosolids may be staged for up to seven days from the first day biosolids are offloaded onto the staging area, with the following exceptions: a. In areas of Karst topography, biosolids offloaded at a permitted land application field shall be land applied by the end of the business day. b. In areas identified in the USDA soil survey as frequently flooded, biosolids offloaded at a permitted land application field shall be land applied by the end of the business day. c. Biosolids shall not be staged overnight on sites that have on-site storage."	Deleted language since it was not necessary due to changes in staging requirements. Requirements moved from B 11; B 10; and B 13 to better organize and reworded to clarify requirements.
9VAC25-32-545 B 3	"3. Staged biosolids that cannot be spread within 14 days shall be covered to prevent contact with precipitation;"	Revised to read: "3. If staged biosolids cannot be spread by the end of the seventh day of staging, the permittee shall take the following actions:"	Reworded based on comments received that 14 days was too long. Seven days is adequate considering that currently biosolids cannot be staged overnight except in emergency situations.
9VAC25-32-545 B 3 a		Added new language: "a. Biosolids shall be covered to prevent contact with precipitation;"	This language was broken out from subdivision "B 3".
9VAC25-32-545 B 3 b		Added new language: "b. The permittee shall notify the department within 24-hours. Notification shall	To clarify requirements.

		include the biosolids source or sources and amounts, location of the site and reason for staging biosolids longer than seven days;"	
9VAC25-32-545 B 3 c		Added new language: "c. Biosolids which have been staged for greater than seven days shall be spread or removed from the field as soon as field conditions become favorable for land application."	To clarify requirements.
9VAC25-32-545 B 4	9VAC25-32-545 B 5	Subdivision renumbered to "B 4".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 5	9VAC25-32-545 B 6	Subdivision renumbered to "B 5".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 6	9VAC25-32-545 B 5	Subdivision renumbered to "B 6".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 6	"Biosolids shall not be staged in the buffer zones;"	Replaced "buffer zone" with "setback areas". Revised to read: "Biosolids shall not be staged in the setback areas;"	To be consistent with terminology used in the regulations.
9VAC25-32-545 B 7		Added new requirement: "7. Biosolids shall not be staged overnight within 400 feet of an occupied dwelling unless reduced or waived through written consent of the occupant and landowner."	New language added based on new setback requirements and the potential for complaints regarding staged biosolids.
9VAC25-32-545 B 8		Added new requirement: "8. Biosolids shall not be staged overnight within 200 feet of a property line unless reduced or waived through written consent of the landowner."	New language added based on new setback requirements and the potential for complaints regarding staged biosolids.
9VAC25-32-545 B 9	9VAC25-32-545 B 8	Subdivision renumbered to "B 9".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 9	"Management practices, as described in the operations manual, shall be utilized as appropriate to prevent pollution of state waters by staged	Deleted the term "operations". Language revised to read: "Management practices, as described in the biosolids management plan, shall be	Revised to be consistent with terminology used throughout the regulations.

	biosolids."	utilized as appropriate to prevent pollution of state waters by staged biosolids."	
9VAC25-32-545 B 10	9VAC25-32-545 B 9	Renumbered to "B 10".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 10	"Staged biosolids are to be inspected by the certified land applier at least every seven days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding or malodor at the site is to be corrected. The certified land applier shall maintain documentation of the inspections of staged biosolids;"	Revised to read: "Staged biosolids are to be inspected by the certified land applier daily. After precipitation events of 0.1 inches or greater inspections shall ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding at the site is to be corrected and any malodor shall be addressed in accordance with the odor control plan. The certified land applier shall maintain documentation of the inspections of staged biosolids; and"	Reworded to clarify requirements.
9VAC25-32-545 B 10	"Staging shall be prohibited in areas identified in the USDA soil survey as frequently flooded;	Moved requirement to 9VAC25-32-545 B 2 a.	Reorganized to clarify requirements.
9VAC25-32-545 B 11	"No staging shall take place in areas of karst topography;"	Moved requirement to 9VAC25-32-545 B 2 b.	Reorganized to clarify requirements.
9VAC25-32-545 B 11	9VAC25-32-545 B 12	Renumbered to "B 11".	Renumbered due to moving and addition of subdivisions.
9VAC25-32-545 B 11	"Staged biosolids shall be managed so as to prevent adverse impacts to water quality or public health; and"	Revised to read: "Staged biosolids shall be managed so as to prevent adverse impacts to water quality or public health."	Revised due to deletion of subdivisions.
9VAC25-32-545 B 13	"Biosolids shall not be staged on sites that have on-site storage.	Moved requirement to 9VAC25-32-545 B 2 c.	Reorganized to clarify requirements.
9VAC25-32-550 B	"B. Two types of storage may be integrated into a complete biosolids	Deleted the term "operations". Revised to read: "B. Two types of	Revised to be consistent with terminology used

	operations management plan:"	storage may be integrated into a complete biosolids management plan:"	throughout the regulations.
9VAC25-32-550 C		New requirement added: "C. All on-site storage facilities shall comply with the requirements of this section by [12 months from the effective date of this regulation]."	This language was added based on TAC discussions requesting clarification of what facilities are included in the regulations.
9VAC25-32-550 D	9VAC25-32-550 C	Renumbered to 9VAC25-32-550 D.	Renumbered due to addition of new subdivision.
9VAC25-32-550 D	"On-site storage. On-site storage is the short-term storage of biosolids within a site approved for land application on a constructed surface at a location preapproved by the department..."	Revised to read: "On-site storage. On-site storage is the short-term storage of biosolids on a constructed surface within a site approved for land application at a location preapproved by the department..."	Reworded to clarify requirements.
9VAC25-32-550 D 6	"6. Biosolids storage shall be located to provide minimum visibility;"	Revised to read: "6. Biosolids storage shall be located to provide minimum visibility from adjacent properties;"	Revised to clarify requirements. Based on discussions with the AG's Office.
9VAC25-32-550 D 8	"8. Stored biosolids are to be inspected...Any ponding or malodor at the site is to be corrected..."	Revised to say "at the storage site". Revised to read: "8. Stored biosolids are to be inspected...Any ponding or malodor at the storage site is to be corrected..."	Based on comments received.
9VAC25-32-550 D 9	"9. The department may prohibit or require additional restrictions for on-site storage in areas of karst topography and environmentally sensitive sites;"	Revised to capitalize "Karst". Revised to read: "9. The department may prohibit or require additional restrictions for on-site storage in areas of Karst topography and environmentally sensitive sites;"	Grammatical correction. Based on discussions with the AG's Office.
9VAC25-32-550 D 10	"Biosolids shall not be stockpiled on sites that have on-site storage; and"	Requirement deleted.	Deleted redundant statement.
9VAC25-32-550 D 10	9VAC25-32-550 D 11	Renumbered to 9VAC25-32-550 D 10.	Renumbered due to deletion of subdivision.
9VAC25-32-	"Biosolids shall not result	Revised to read: "Storage of	Revised to clarify

550 D 10	in water quality, public health or nuisance problems."	biosolids shall be managed so as to prevent adverse impacts to water quality or public health."	requirements.
9VAC25-32-550 E	9VAC25-32-550 D	Renumbered to 9VAC25-32-550 E.	Renumbered due to addition of subdivision.
9VAC25-32-550 E	"Routine storage. Routine storage is the long-term storage of biosolids at a facility preapproved by the department and constructed specifically for the storage of biosolids to be applied at any site included in permits held by the permit holder of the storage facility. Routine storage facilities..."	Revised to read: "Routine storage. Routine storage is the long-term storage of biosolids at a facility not located at the site of the wastewater treatment plant, preapproved by the department and constructed specifically for the storage of biosolids to be applied at any permitted site. Routine storage facilities ..."	Revised language to clarify that this applies to storage facilities located off WWTP sites.
9VAC25-32-550 E 1 c	"c. All storage facilities located offsite of property owned by the generator shall be provided with a minimum 750-foot buffer zone. The length of the buffer zone considered will be the distance measured from the perimeter of the storage facility. Residential uses, high-density human activities and activities involving food preparation are prohibited within the buffer zone. The board may consider a reduction of up to half of the above buffer requirements based on such facts as lagoon area, topography, prevailing wind direction, and the inclusion of an effective windbreak in the overall design."	Replaced "buffer zones" with "setback areas". Revised to include reference to the "reduction of the setback requirements based on site-specific factors". Revised to read: "c. All storage facilities located offsite of property owned by the generator shall be provided with a minimum 750-foot setback area. The length of the setback area considered will be the distance measured from the perimeter of the storage facility. Residential uses, high-density human activities and activities involving food preparation are prohibited within the setback area. The board may reduce the setback requirements based on site-specific factors such as facility size, topography, prevailing wind direction, and the inclusion of an effective windbreak in the overall design."	Revised to clarify requirements and to avoid confusion with "vegetated buffers". Revised to clarify requirements.

<p>9VAC25-32-550 E 2 b</p>	<p>"b. If alternative methods of management cannot be adequately verified, contractors should provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of biosolids transported into Virginia from out-of-state treatment works generating at least a Class II level treated biosolids."</p>	<p>Changed "should" to "shall" and changed "Class II level treated biosolids" to "Class B biosolids". Revised to read: "b. If alternative methods of management cannot be adequately verified, contractors shall provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of biosolids transported into Virginia from out-of-state treatment works generating at least a Class B biosolids."</p>	<p>Changed terms to be consistent throughout the regulations. Changes made based on comments received.</p>
<p>9VAC25-32-550 E 3</p>	<p>Construction.</p>	<p>Revised title of subdivision to "Facility design".</p>	<p>Renamed section to clarify requirements. Revised based on TAC discussions.</p>
<p>9VAC25-32-550 E 3 a</p>		<p>Added new language: "a. All drawings and specifications shall be submitted in accordance with 9VAC25-790-160."</p>	<p>Added reference to the SCAT regulations to clarify requirements. Changes made based on discussions with permittees.</p>
<p>9VAC25-32-550 E 3 b</p>	<p>9VAC25-32-550 E 3 a</p>	<p>Renumbered subdivision to 9VAC25-32-550 E 3 b.</p>	<p>Renumbered to account for the addition of new subdivision language.</p>
<p>9VAC25-32-550 E 3 c</p>	<p>9VAC25-32-550 E 3 b</p>	<p>Renumbered subdivision to 9VAC25-32-550 E 3 c.</p>	<p>Renumbered to account for the addition of new subdivision language.</p>
<p>9VAC25-32-550 E 3 d</p>		<p>Added new language: "d. Existing facilities permitted as routine storage facilities and designed to contain liquid biosolids may be used to store dewatered biosolids. The supernatant shall be managed as liquid biosolids in accordance with 9VAC25-32-550 D 5 d. Freeboard shall be maintained in accordance with 9VAC25-32-550 D 5 c.</p>	<p>This condition was added based on discussions of the TAC that is it not practical to cover existing lagoons where dewatered biosolids are stored.</p>

		The department may require additional monitoring prior to land application."	
9VAC25-32-550 E 3 e	9VAC25-32-550 E 3 c	Renumbered subdivision to 9VAC25-32-550 E 3 e.	Renumbered to account for the addition of new subdivision language.
9VAC25-32-550 E 3 f	9VAC25-32-550 E 3 d	Renumbered subdivision to 9VAC25-32-550 E 3 f.	Renumbered to account for the addition of new subdivision language.
9VAC25-32-550 E 3 g	9VAC25-32-550 E 3 e	Renumbered subdivision to 9VAC25-32-550 E 3 g.	Renumbered to account for the addition of new subdivision language.
9VAC25-32-550 E 4	"4. Monitoring. All biosolids storage facilities in excess of 100 wet ton capacity shall be monitored in accordance with the requirements of this regulation..."	Deleted phrase "in excess of 100 wet ton capacity". Revised to read: "4. Monitoring. All biosolids storage facilities shall be monitored in accordance with the requirements of this regulation..."	Technical correction.
9VAC25-32-550 E 5 f	"f. If malodors related to the stored biosolids are verified by DEQ at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours."	Revised to change "DEQ" to "the department". Revised to read: "f. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours."	Revised to use consistent terminology. Based on discussions with the AG's Office.
9VAC25-32-560 A 1	"1. All biosolids application rates, application times and other site management operations shall be restricted as specified in the approved operations management plan. The operations management plan shall include a nutrient management plan..."	Delete term "approved". Replace the term "operations management plan" with "biosolids management plan" 2 times in subdivision. Revised to read: "1. All biosolids application rates, application times and other site management operations shall be restricted as specified in the biosolids management plan. The biosolids management plan	All components of the biosolids management plan are not required to be approved, particularly the NMP. Revised to be consistent with terminology used throughout the regulations.

		shall include a nutrient management plan..."	
9VAC25-32-560 A 1 a-e and Table 1	Biosolids Utilization Methods; Requirements applicable to land application of biosolids management plan shall include NMP; NMP requirements.	Deleted subdivisions and Table 1; Moved all to 9VAC25-32-410.	To consolidate information and requirements of the biosolids management plan in one place. To clarify requirements.
9VAC25-32-560 B 2 d	"d. Soil test pH must be greater than or equal to 5.5 at the time of each biosolids application if the biosolids to be land applied have not been alkaline stabilized."	Revised to read: "d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized."	Revised based on comments received.
9VAC25-32-560 B 2 e	"e. Soil test potassium levels must be greater than or equal to 38 part per million (Mehlich I analytical procedure or equivalent) at the time of each biosolids application."	Revised to read: "e. When soil test potassium levels are less than 38 part per million (Mehlich I analytical procedure or equivalent), the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application."	Revised based on comments received.
9VAC25-32-560 B 3 a	"a. Site specific application rates shall not exceed the rates established in the nutrient management plan not result in exceedance of the cumulative trace element loading rates specified in 9VAC25-32-356 Table 2."	Revised to replace "Table 2" with "Table 3" reference. Revised to read: "a. Site specific application rates shall not exceed the rates established in the nutrient management plan not result in exceedance of the cumulative trace element loading rates specified in 9VAC25-32-356 Table 3."	Revised to correct table reference due to renumbering of tables.
9VAC25-32-560 B 3 c (1) – (3)	Biosolids Utilization Methods; Agricultural use; Management Practices; PAN rates for crops.	Deleted subdivisions.	Deleted based on comments received. Due to redundancy with DCR Regulation and statute. All PAN rates are established in DCR regulations in accordance with § 10.1-104.2
9VAC25-32-	9VAC25-32-560 B 3 d	Changed to 9VAC25-32-560	Renumbered

560 B 3 c	"Application frequency."	B 3 c.	subdivision due to deletion of subdivision.
9VAC25-32-560 B 3 c	"(1) Infrequent. If biosolids are applied...The infrequent application rate may be restricted (i) down to 10% of the maximum cumulative loading rate (9VAC25-32-356 Table 2) for cadmium and lead..."	Deleted subdivision reference. Revised to correct table reference. Revised to read: "Infrequent. If biosolids are applied...The infrequent application rate may be restricted (i) down to 10% of the maximum cumulative loading rate (9VAC25-32-356 Table 3) for cadmium and lead..."	Revised subdivision reference due to deletion of subdivision (2). Revised to correct table reference due to renumbering of tables.
9VAC25-32-560 B 3 c	"9VAC25-32-560 B 3 (2) Frequent. Frequent below agronomic application rate involves..."	Deleted subdivision.	Deleted description of frequent application because allowable frequency and rates will be dictated by NMP.
9VAC25-32-560 B 3 d	9VAC25-32-560 B 3 e.	Renumbered to 9VAC25-32-560 B 3 d.	Renumbered to account for deletion of subdivisions.
9VAC25-32-560 B 3 d (1)	"(1) Field management. The application rate of all application equipment shall be routinely measured as described in an approved operations management plan..."	Delete "an approved" and insert "a". Replaced "operations" with "biosolids". Revised to read: "(1) Field management. The application rate of all application equipment shall be routinely measured as described in an approved biosolids management plan..."	All components of the biosolids management plan are not required to be approved, particularly the NMP. Revised to be consistent with terminology used throughout the regulations.
9VAC25-32-560 B 3 d (2)	"(2) Surface incorporation may be required on cropland by the department, or the local monitor with the approval of the department, to mitigate excessive odors when incorporation is practicable and compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service."	Revised to replace "excessive odors" with "malodors" and to include the option for the use of a "soil conservation contract". Revised to read: "(2) Surface incorporation may be required on cropland by the department, or the local monitor with the approval of the department, to mitigate malodors when incorporation is practicable and compatible with a soil conservation plan or contract meeting the	Revisions made to correct terminology to common usage.

		standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service."	
9VAC25-32-560 B 3 d (3)	"(3) Slopes above 15%. Biosolids shall not be applied to site slopes exceeding 15%."	Revised to add waiver provision. Revised to read: "(3) Slopes above 15%. Biosolids shall not be applied to site slopes exceeding 15%. This restriction may be waived by the department for the establishment and maintenance of perennial vegetation or based on site specific criteria and BMPs in place in the field."	Based on comments received. The organic matter in the biosolids helps to stabilize the soil allowing the growth of stabilizing vegetation and reducing erosion and soil loss.
9VAC25-32-560 B 3 e	9VAC25-32-560 B 3 f. "Buffer zones."	Renumbered from "B3 f" to B 3 e". Revised title of subdivision to read: "Setback distances."	Renumbered to account for deletion of previous subdivision. Revised to clarify requirements and to avoid confusion with "vegetated buffers". Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 B 3 e (1)	"(1) Setback distances. The location of land application of biosolids shall not occur within the following buffer zone requirements (Table 2 of this section):	Revised to read: "(1) Setback distances. The land application of biosolids shall not occur within the following setback distance requirements (Table 1 of this section):	Revised to clarify requirements and to correct table reference.
9VAC25-32-560 B 3 e (1) – Table 1	9VAC25-32-560 B 3 e (1) – Table 2	Deleted Table 2 – Minimum Buffer Zone Requirements and Replaced it with Table 1 – Minimum Setback Distance Requirements – Removed "incorporation" and "Winter" columns from original Table 2; revised "adjacent features" and "setback" distances and associated footnotes to include: "Occupied dwelling"	Revisions based on TAC discussions; discussions with VDH; and discussions with VA Tech Soil Scientists. Revisions made to be consistent with existing regulations.

		<p>(200^{1,2,3}); "Odor sensitive receptors (without injection or same day incorporation)" (400³); "Odor sensitive receptors (with injection or same day incorporation): (200); "Property lines" (100^{2,4}); "Property lines of publicly accessible sites⁵" (200); "Water supply wells or springs" (100); "Public water supply reservoirs" (400); "All segments of streams and tributaries designated as a Public Water Supply under the Water Quality Standards" (100); "Surface waters without a vegetated buffer" (100); "Surface waters with a 35-foot vegetated buffer" (35); "Agricultural drainage ditches" (10); "All improved roadways" (10); "Rock outcrops" (25); "Open sinkholes" (100); "Limestone rock outcrops and closed sinkholes" (50). Associated footnotes include: ¹The setback distance to occupied dwellings may be reduced or waived upon written consent of the occupant and landowner of the dwelling. ² The department shall grant to any landowner or resident in the vicinity of a biosolids land application site an extended setback of up to 200 feet from their property line and up to 400 feet from their occupied dwelling upon their request. In order for an extended setback request to be granted, the request must be received by the department no later than 48 hours before land application commences on</p>	
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		<p>the field affected by the extended setback, and communicated to the permittee no later than 24 hours before land application commences on the field affected by the extended setback. The department may extend a setback distance within 48 hours of land application if requested by the Virginia Department of Health. If the request is made to the permittee no later than 24 hours before land application commences on the field affected by the extended setback, the permittee shall implement the extended setback and notify the department.</p> <p>³Setback distances may be extended beyond 400 feet where an evaluation by the Virginia Department of Health determines that a setback in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual. ⁴The setback distance to property lines may be reduced or waived upon written consent of the landowner. ⁵Publicly accessible sites are open to the general public and routinely accommodate pedestrians and include, but are not limited to, schools, churches, hospitals, parks, nature trails, businesses open to the public and sidewalks. Temporary structures, public roads or similar thoroughfares are not considered publicly accessible. ⁶A closed sinkhole does not have an</p>	
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		open conduit to groundwater. The setback from a closed sinkhole may be reduced or waived by the department upon evaluation by a professional soil scientist."	
9VAC25-32-560 B 3 e (1) – Table 1 – Footnote 2	² The department shall grant to any landowner or resident in the vicinity of a biosolids land application site an extended setback of up to 200 feet from their property line and up to 400 feet from their occupied dwelling upon their request. In order for an extended setback request to be granted, the request must be received by the department no later than 48 hours before land application commences on the field affected by the extended setback, and communicated to the permittee no later than 24 hours before land application commences on the field affected by the extended setback. The department may extend a setback distance within 48 hours of land application if requested by the Virginia Department of Health. If the request is made to the permittee no later than 24 hours before land application commences on the field affected by the extended setback, the permittee shall implement the extended setback and notify the department.	Revised footnote to read: ² The department shall grant to any landowner or resident in the vicinity of a biosolids land application site an extended setback of up to 200 feet from their property line and up to 400 feet from their occupied dwelling upon request from their physician based on medical reasons. In order for an extended setback request to be granted, the request must be submitted to the department in writing on a form provided by the department. A request must be received by the department no later than 48 hours before land application commences on the field affected by the extended setback, and communicated to the permittee no later than 24 hours before land application commences on the field affected by the extended setback. The department may extend a setback distance within 48 hours of land application if requested by the Virginia Department of Health in connection with the landowner or resident' physician."	Revised to clarify process for requesting a setback extension. Based on SWCB actions.
9VAC25-32-560 B 3 e (2)	"(2) Reduced buffer setback distances. The stated buffer zones to	Revised to read: "(2) In cases where more than one setback distance is involved,	Revised to clarify requirements.

	adjacent property boundaries and drainage ditches constructed for agricultural operations may be reduced by 50% for subsurface application (includes same day incorporation) unless state or federal regulations provide more stringent requirements. Written consent of affected landowners is required to reduce buffer distances from property lines and dwellings. In cases where more than one buffer distances is involved, the most restrictive distance governs."	the most restrictive distance governs.	
9VAC25-32-560 B 3 e (3)	"(3) Waivers. Waivers from adjacent property residents and landowners may only be used to reduce buffer setback distances from occupied dwellings and property lines."	Replaced "buffer" with "setback".	Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 B 3 e (4)	"(4) Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes. For applications where surface applied biosolids are not incorporated, the department (or the local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors."	Revised to read: "(4) Extended setback distances. The department may increase setback requirements based on site specific features, such as agricultural drainage features and site slopes."	
9VAC25-32-	9VAC25-32-560 B 3 h:	Renumber from 9VAC25-	Renumbered to

560 B 3 f	"Voluntary extensions of buffer distances. If a permit holder negotiates a voluntary agreement with a landowner or resident to extend buffer distances or add other more restrictive criteria than required by this regulation, the permit holder shall document the agreement in writing and provide the agreement to the department. Voluntary buffer increases or other management criteria will not become an enforceable part of the land application permit unless the permit holder modifies the operations management plan to include the additional restriction."	32-560 B 3 h to B 3 f. Revise to replace "buffer" with "setback" 3 times in the subdivisions. Revise to replace "operations management plan" with "biosolids management plan". Revised to read: "Voluntary extensions of setback distances. If a permit holder negotiates a voluntary agreement with a landowner or resident to extend setback distances or add other more restrictive criteria than required by this regulation, the permit holder shall document the agreement in writing and provide the agreement to the department. Voluntary setback increases or other management criteria will not become an enforceable part of the land application permit unless the permit holder modifies the biosolids management plan to include the additional restriction."	account for deletion of previous subdivision. Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 B 3 g	9VAC25-32-560 B 3 i: "Extension of buffer distances with phosphorus index..."	Renumber from 9VAC25-32-560 B 3 1 to B 3 g. Revise to replace "buffer" with "setback". Revised to read: "Extension of setback distances with phosphorus index..."	Renumbered to account for deletion of previous subdivision. Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 C	C. Forestland (Silviculture). Silvicultural use includes application of biosolids to commercial timber and fiber production land..."	Strike word "commercial".	To clarify that the regulations apply to all timber and fiber production land.
9VAC25-32-560 C 1	"1. Biosolids standards. Refer to 9VAC25-32-590 and 9VAC25-32-660 of this article."	Revise to read: "1. Biosolids standards. Refer to the standards of this Article."	Revised to correct reference to the standards; Section 590 was repealed.
9VAC25-32-560 C 2 b	"b. Notwithstanding the requirements of	Replace "subsection" with "subdivision".	Correct terminology.

	subsection B 2 of this section..."		
9VAC25-32-560 C 2 c	"c. Notwithstanding the requirements of subsection B 2 of this section..."	Replace "subsection" with "subdivision".	Correct terminology.
9VAC25-32-560 C 3 a	"a. Application rates. Biosolids application rates shall be in accordance with the operations management practices plan. The operations management plan shall include..."	Replaced "operations management practices plan" and "operations management plan" with "biosolids management plan". Revised to read: "a. Application rates. Biosolids application rates shall be in accordance with the biosolids management plan. The biosolids management plan shall include..."	Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 C 3 b (1) (c)	"(c) Application scheduling included in the operations management practices plan shall ..."	Replaced "operations management practices plan" with "biosolids management plan".	Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 C 3 b (1) (d)	"(d) Monitoring requirements shall be site specific and may include groundwater groundwater,..."	Undo edit - leave "groundwater" as one word.	Use of consistent terminology.
9VAC25-32-560 C 3 b (2)	"(2) Buffer zones. Buffer zones should conform to those for agricultural utilization. Refer to Table 2 of this section."	Revised to replace "buffer zones" with "setbacks" twice in the subdivision. Replaced "should" with "shall". Corrected reference to Table. Revised to read: "(2) Setbacks: Setbacks shall conform to those for agricultural utilization. Refer to Table 2 of this section."	Revised to use consistent terminology throughout the regulations. Revised to correct table reference.
9VAC25-32-560 D 3 a	"a. Application rates. The biosolids application rates shall be established in the nutrient management practices plan in consultation with the Virginia Department of Mines, Minerals and Energy and the Virginia Department of Conservation and Recreation. The nutrient	Revised to replace "nutrient management practices plan" with biosolids management plan". Revised to include reference to consultation with Virginia Polytechnic Institute and State University. Revised to include condition under which approval of a nutrient management plan by the Department of Conservation	Revised to use consistent terminology throughout the regulations. Revised to correct references. Revised to clarify when approval of a nutrient management plan by the Department of Conservation and

	management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance."	and Recreation is required. Revised to read: "a. Application rates. The biosolids application rates shall be established in the biosolids management plan in consultation with the Virginia Department of Mines, Minerals and Energy, the Virginia Department of Conservation and Recreation and the Department of Crop and Soil Environmental Sciences of the Virginia Polytechnic Institute and State University. The nutrient management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance where land application is proposed at greater than agronomic rates."	Recreation is required. Based on comments received.
9VAC25-32-560 D 3 b	"b. Vegetation selection. The land shall be seeded with grass and legumes even when reforested. The management practices plan shall include information on the seeding mixture and a detailed seeding schedule."	Replaced "management practices plan" with "biosolids management plan". Revised to read: "b. Vegetation selection. The land shall be seeded with grass and legumes even when reforested. The biosolids management plan shall include information on the seeding mixture and a detailed seeding schedule."	Revised to use consistent terminology throughout the regulations.
9VAC25-32-560 D 3 c (1)	"(1) The soil pH shall...The application rate shall be limited by the most restrictive cumulative trace element loading (Table 2 of this section)."	Revised table reference: Revised to read: "(1) The soil pH shall...The application rate shall be limited by the most restrictive cumulative trace element loading (9VAC25-32-356 Table 3)."	Revised to correct table reference.
9VAC25-32-570 A 1	"1. The biosolids product must be registered with the Virginia Department of Agriculture and Consumer Services in accordance	Revised to read: "1. The biosolids product must be registered with the Virginia Department of Agriculture and Consumer Services in	Revised as requested by VDACS in comments received. Deleted requirement

	with regulations promulgated under § 3.2-3601 of the Code of Virginia. The permit applicant shall obtain such registration prior to issuance of a permit by the board."	accordance the provisions of § 3.2-3607 of the Code of Virginia."	to be registered as requested by VDACS in comments received.
9VAC25-32-570 A 4	"4. The biosolids product must meet the ceiling concentrations specified in 9VAC25-32-356 – Table 1)."	Changed reference from "Table "1 to "Table 2".	Corrected table reference to account for renumbering of tables.
9VAC25-32-570 A 5	"5. The biosolids product must meet the pollutant concentrations specified in 9VAC25-32-356 – Table 3."	Changed reference from "Table 3" to "Table 4".	Corrected table reference to account for renumbering of tables.
9VAC25-32-570 A 6	"6. Additional parameters such as the organic chemicals listed in Table 1 of this section may be required for screening as well as: aluminum (mg/kg), water soluble boron (mg/kg, calcium (mg/kg), chlorides (mg/l, manganese (mg/kg), sulfates (mg/kg), and those pollutants for which removal credits are granted."	Revised and replaced "sulfates" with "sulfur" and to delete reference to Table 1. Revised to read: "6. Additional parameters may be required for screening purposes such as organic chemicals, aluminum (mg/kg), water soluble boron (mg/kg, calcium (mg/kg), chlorides (mg/l, manganese (mg/kg), sulfur (mg/kg), and those pollutants for which removal credits are granted."	Revised to clarify the requirements based on comments received and on TAC discussions.
9VAC25-32-570 A 6 – Table 1	Table 1 – Organic Chemical Testing May be Required to Identify an Exceptional Quality Biosolids.	Deleted Table 1 and its contents.	Revised to clarify the requirements based on comments received and on TAC discussions.
9VAC25-32-570 B 1	"1. Any permit holder who distributes or markets exceptional quality biosolids shall maintain records as required by regulations promulgated under § 3.2-3601 of the Code of Virginia and make the records available to the department upon request."	Revised to read: "1. Any permit holder who distributes or markets exceptional quality biosolids shall comply with the reporting requirements of § 3.2-3609 and § 3.2-3610. The records shall be maintained for five years and made available to the department upon request."	Revised to comply with the reporting requirements of § 3.2-3609 and § 3.2-3610as requested by VDACS through comments received.

9VAC25-32-570 B 2 b	"b. The percent solids of a blended product derived from biosolids is equal to or greater than 40% based on moisture content and total solids ad achieves a carbon to nitrogen ration of at least 25:1."	Deleted statement and replaced with: "b. A blended product derived from biosolids is utilized for a purpose other than land application at agricultural operations."	Change made based on TAC discussions.
9VAC25-32-570 B 3	"3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the plan to the department, the farm operator of the site, and the Department of Conservation and Recreation regional office."	Revised to delete requirement for submittal of a copy of the plan to the "department", replaced "farmer" and "farm" and deleted reference to regional offices. Revised to read: "3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the plan to the farm operator of the site and the Department of Conservation and Recreation."	Removed requirement to submit to department, because DCR gets it and their role is to review. It must be on site for review by the inspector. Removed reference to DCR regional office. DCR and DEQ will determine who at DCR receives the NMP and will establish the procedure in guidance. Grammatical correction.
9VAC25-32-570 D	"D. Information furnished to all users. Labeling requirements shall be addressed in an operations management plan..."	Replaced "an operations management plan" with "a biosolids management plan". Revised to read: "D. Information furnished to all users. Labeling requirements shall be addressed in a biosolids management plan..."	Revised to use consistent terminology throughout the regulations.
9VAC25-32-570 D 3	"3. The annual whole sludge application rate for the biosolids that does not cause any of the annual pollutant loading rates in Table 4 of 9VAC25-32-356 to be exceeded; and"	Revised table reference from "Table 4" to "Table 5".	Corrected table reference to account for renumbering of tables.
9VAC25-32-570 D 4	"4. Information required in accordance with regulations promulgated under § 3.2-3601 of the Code of Virginia."	Revised to include "labeling provisions reference". Revised to read: "4. Information required in accordance with regulations"	Revision requested by VDACS through comments received.

		promulgated under § 3.2-3601 of the Code of Virginia and with the labeling provisions of § 3.2-3611 of the Code of Virginia.."	
9VAC25-32-570 E 1 a	"a. The concentration of each pollutant listed in Table 3 of 9VAC25-32-356 in the biosolids;"	Replaced "Table 3" with "Table 4" reference.	Revised to account for renumbering of tables in section.
9VAC25-32-570 E 1 b	"b. The following certification statement; "I certify under penalty of law, that..."	Insert "comma". Revised to read: "b. The following certification statement; "I certify, under penalty of law, that..."	Grammatical correction.
9VAC25-32-570 E 2 a	"a. The concentration of each pollutant listed in Table 3 of 9VAC25-32-356 in the material;"	Replaced "Table 3" with "Table 4" reference.	Revised to account for renumbering of tables in section.
9VAC25-32-570 E 3	"3. If the requirements in 9VAC25-32-356 A 4 b are met when biosolids is sold or given away in a bag..."	Revised subdivision reference from 9VAC25-32-356 A 4 b to B 4 b.	Corrected subdivision reference.
9VAC25-32-570 E 3 a	"a. The annual whole sludge application rate for the biosolids that does not cause the annual pollutant loading rates in Table 4 of 9VAC25-32-356 6 o be exceeded;"	Replaced "Table 4" with "Table 5" reference.	Revised to account for renumbering of tables in section.
9VAC25-32-570 E 3 b	"b. The concentration of each pollutant listed in Table 4 of 9VAC25-32-356 in the biosolids;"	Replaced "Table 4" with "Table 5" reference.	Revised to account for renumbering of tables in section.
9VAC25-32-570 E 3 c	"I certify, under penalty of law, that the information that will be used to determine compliance with the management practice in ..."	Replace "practice" with "practices". Revised to read: "I certify, under penalty of law, that the information that will be used to determine compliance with the management practice practices in ..."	Grammatical correction.
9VAC25-32-570 E 3 c	"... (insert one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 was prepared..."	Insert closing parenthesis. Revised to read: "... (insert one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8) was prepared..."	Grammatical correction.
9VAC25-32-580 1	"1. Incineration. Emission quality control requirements...Buffer	Replaced "buffer separation" with "setback distance" requirements.	Revised to use consistent terminology

	separation requirements will be established on a site specific basis in accordance with the applicable regulations."		throughout the regulations.
9VAC25-32-675 A 1	"1. The requirement in subdivision 2 of this subsection and the requirements in either subdivisions 3, 4, 5, 6, 7, or 8 of this subsection shall be met for a sewage sludge to be classified as Class A biosolids with respect to pathogens."	Replace "a sewage sludge" with "biosolids". Revised to read: "1. The requirement in subdivision 2 of this subsection and the requirements in either subdivisions 3, 4, 5, 6, 7, or 8 of this subsection shall be met for biosolids to be classified as Class A biosolids with respect to pathogens."	Revised to use consistent terminology throughout the regulations.
9VAC25-32-675 A 3 a	"a. Either the density...is prepared to meet the ceiling concentrations in 9VAC25-32-356 Table 1, the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 4 a	"a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis) at the time the biosolids is used or disposed, or the density of Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis); at the time the biosolids is prepared..."	Moved the phrase "at the time the biosolids is used or disposed". Revised to read: "a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis) or the density of Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared..."	Revised to use consistent terminology throughout the regulations and to clarify and better organize the requirements.
9VAC25-32-675 A 4 a	"a. Either the density... is prepared to meet the ceiling concentrations in 9VAC25-32-356 Table 1, the pollutant concentrations in 9VAC25-32-356 Table	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.

	3..."		
9VAC25-32-675 A 5 a	"a. Either the density of fecal coliform in the biosolids...the ceiling concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 5 b (1)	"(1) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one plaque-forming unit per four grams..."	Replaced "plaque-forming unit" with "Plaque-forming Unit".	Terminology correction.
9VAC25-32-675 A 5 b (2)	"(2) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one plaque-forming unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one plaque-forming unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented; and"	Replaced "plaque-forming unit" with "Plaque-forming Unit" twice in the subdivision. Replace the term "sewage sludge" with "biosolids" once in the subdivision. Revised to read: "(2) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meets the enteric virus density requirement are documented; and"	Terminology correction. Revised to use consistent terminology throughout the regulations.
9VAC25-32-	"(3) After the enteric virus	Replaced the term "sewage	To use consistent

675 A 5 b (3)	reduction in subdivision 5 b (2) of this subsection is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A..."	sludge" with "biosolids".	terminology throughout the regulations.
9VAC25-32-675 A 6 a	"a. Either the density of fecal coliform in the biosolids...the ceiling concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 6 b	"b. The density of enteric viruses in the biosolids shall be less than one plaque-forming unit per four grams of total solids..."	Replaced "plaque-forming unit" with "Plaque-forming Unit".	Terminology correction.
9VAC25-32-675 A 6 b	"b. The density of enteric viruses...to meet the ceiling concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 6 c	"c. The density of viable helminth ova... to meet the ceiling concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 7 a	"a. Either the density of fecal coliform in the biosolids...the ceiling concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.
9VAC25-32-675 A 8 a	"a. Either the density of fecal coliform in the biosolids...the ceiling	Replaced reference to "Table 1" with "Table 2" and "Table 3" with Table 4".	Revised to account for renumbering of tables in the section.

	concentrations in 9VAC25-32-356 Table 1; the pollutant concentrations in 9VAC25-32-356 Table 3..."		
9VAC25-32-675 B 2 b	"b. The geometric mean of the density of fecal coliform in the samples collected in subdivision 2 a of this subsection shall be less than either 2,000 most probable number per gram of total solids (dry weight basis) or 2,000,000 colony forming units per gram of total solids (dry weight basis)."	Replaced "most probable number" with "Most Probable Number" and "colony forming units" with "Colony Forming Units".	Terminology correction.
9VAC25-32-675 B 4	"4. Class B – Alternative 3. Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a process to significantly reduce pathogens, as determined by the board."	Replaced "Sewage sludge" with "Biosolids" in the subdivision.	To use consistent terminology throughout the regulations.
9VAC25-32-675 B 5 f	"f. Feeding of harvested crops to animals shall not take place for 30 days following surface application (two months for lactating dairy livestock)."	Deleted requirement.	Based on discussions with the AG's Office. Requirement addressed in footnote to Table 1.
9VAC25-32-675 B 5 f	9VAC25-32-675 B 5 g	Renumbered subdivision B 5 g to B 5 f.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-675 B 5 g	9VAC25-32-675 B 5 h	Renumbered subdivision B 5 h to B 5 g.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-675 B 5 h	9VAC25-32-675 B 5 i	Renumbered subdivision B 5 i to B 5 h.	Renumbered to account for deletion of previous subdivision.
9VAC25-32-675 B 5 - Table 1	Type of Application - "Time lapse required before above ground food crops with harvested plants that touch the	Replace term "plants" with "parts". Revised to read: "Time lapse required before above ground food crops with harvested plants parts	Correct terminology.

	biosolids/soil mixture can be harvested"	that touch the biosolids/soil mixture can be harvested"	
9VAC25-32-675 B 5 – Table 1 – Footnote (4)	" ⁽⁴⁾ The restriction for lactating cows is two months."	Revised to read: " ⁽⁴⁾ The restriction for lactating cows is 60 days."	Revised based on discussions with the AG's Office and to use consistent terminology throughout the regulations.
9VAC25-32-675 – Table 1 – Footnote (5)	" ⁽⁵⁾ This time restriction must be met unless otherwise specified by the permitting authority."	Revised to read: " ⁽⁵⁾ This time restriction must be met unless otherwise specified by the department."	To clarify requirement and to use consistent terminology throughout the regulations.
9VAC25-32-675 C	9VAC25-32-675 C 1: "C. Domestic septage. 1. The site restrictions in subdivision B 5 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or..."	Delete subdivision number. Revised to read: "C. Domestic septage. The site restrictions in subdivision B 5 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site."	Revised to clarify requirements.
9VAC25-32-675 C	9VAC25-32-675 C 2	Delete subdivision and subdivision text.	Deleted requirement to be consistent with changes made in the regulations.
9VAC25-32-685 B	"B. Vector attraction reduction requirements.	Revised title to read: "B. Vector attraction reduction options."	To clarify that these are available options to meet required vector attraction reductions.
9VAC25-32-685 B 9	"9. Sewage sludge shall be injected below the surface of the land."	Moved language to new 9VAC25-32-685 B 9 a and replace with: "9. Sewage sludge injection requirements."	Revised to clarify requirements.
9VAC25-32-685 B 9 a	9VAC25-32-685 B 9.	Renumbered subdivision B 9 to B 9 a.	Renumbered to account for the addition of a new subdivision title.
9VAC25-32-685 B 9 b	9VAC25-32-685 B 9 a	Renumbered B 9 a to B 9 b.	Renumbered to account for reorganization of subdivision.
9VAC25-32-685 B 9 c	9VAC25-32-685 B 9 b	Renumbered B 9 b to B 9 c.	Renumbered to account for reorganization of subdivision.

<p>9VAC25-32-685 B 10</p>	<p>"10. Sewage sludge applied to the land surface or placed on an active sewage sludge unit:"</p>	<p>Moved language to new 9VAC25-32-685 B 10 a and replaced with new subdivision header: "10. Sewage sludge incorporation requirements:"</p>	<p>Revised and reorganized to clarify requirements.</p>
<p>9VAC25-32-685 B 10 a.</p>	<p>9VAC25-32-685 B 10: "Sewage sludge applied to the land surface ort placed on an active sewage unit:"</p>	<p>Renumbered and incorporated with original 9VAC25-32-685 B 10 a to read:"a. Sewage sludge applied to the land surface ort placed on an active sewage unit shall be incorporated into the soil within six hours after application to or placement on the land unless otherwise specified by the board."</p>	<p>Revised and reorganized to clarify requirements.</p>
<p>9VAC25-32-690 A</p>	<p>"A. No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless...Certified land applicators shall possess...including their certificate number issued by the department. Monthly reports submitted in accordance with the requirements..."</p>	<p>Insert language requiring the maintenance of an operator log. Revise to read: "A. No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless...Certified land applicators shall possess...including their certificate number issued by the department. The Certified land applicator shall maintain an operator field log to document at minimum, site location, arrival and departure times, inspectors or any visitors to the site, complaints received and any unusual condition or event. The field log shall be available for inspection by the department. Monthly reports submitted in accordance with the requirements..."</p>	<p>This revision is based on comments received regarding certified land applier accountability, difficulties in getting proper documentation with monthly reports and lack of permittee cooperation in regard to a certified land applier being on site at all times.</p>
<p>9VAC25-32-780 A</p>	<p>"A. A permit holder or applicant must demonstrate financial responsibility for clean-up costs, personal injury, bodily injury, and property</p>	<p>Revise to include reference to "pollution liability" and "general liability". Revised to read: "A. A permit holder or applicant must demonstrate financial responsibility for</p>	<p>Revised language in order to clarify requirements. Based on comments received.</p>

	damage resulting from the transport, storage, and land application of biosolids in Virginia. The permit holder or applicant must maintain liability coverage in the amount of \$2 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs."	clean-up costs, personal injury, bodily injury, and property damage resulting from the transport, storage, and land application of biosolids in Virginia. The permit holder or applicant must maintain pollution liability and general liability coverage in the amount of \$2 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs."	
9VAC25-32-780 B 1	"1. Having liability insurance as specified in 9VAC25-32-790;"	Revised to read: "A Pollution Liability policy as well as a General Liability policy that covers all activities associated with the "Transport, Storage, and Land Application" of biosolids as specified in 9VAC25-32-790;" Insert missing "comma".	Revised in order to clarify requirements. Based on comments received.
9VAC25-32-790 A	"A. Each insurance policy must be amended by attachment of a biosolids liability endorsement or evidenced by a certificate of liability insurance..."	Revise to include reference to "pollution and general liability". Revised to read: "A. Each pollution and general liability insurance policy must be amended by attachment of an endorsement or evidenced by a certificate of liability insurance..."	Revised in order to clarify requirements. Based on comments received.
9VAC25-32-790 B	"B. Each insurance policy...Standard and Poor (AAA..."	Replace "Standard and Poor" with "Standard and Poor's".	Correct terminology.
9VAC25-32 FORMS	"Virginia Pollution Abatement Permit Application, Form D, Municipal Effluent and Biosolids (rev. 4/09)"	Revise to list the Form D's existing multiple parts and revised parts: " <u>Virginia Pollution Abatement Permit Application, Form D, Municipal Effluent and Biosolids: Part D-I: Land Application of Municipal Effluent (rev. 4/09); Part D-II: Land Application of Biosolids (rev. 4/09); Part D-III: Effluent Characterization Form (rev. 4/09); Part D-IV:</u>	Revised to clarify requirements and the content of the individual parts of Form D and to allow for the addition of revised parts of the form. Form D is the only VPA form that has multiple parts.

		<u>Biosolids Characterization Form (rev. 4/09); Part D-V: Non-Hazardous Waste Declaration Form (rev. 4/09); D-VI: Land Application Agreement – Biosolids and Industrial Residuals (rev. 10/11); Part D-VII: Request for Extended Setback from Biosolids Land Application Field (rev. 10/11).</u>	
9VAC25-32 Documents Incorporated by Reference	Documents Incorporated by Reference: "Method 1668B"	Deleted document: "Method 1668B"	Method 1668B is not an approved method.

Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

All comments received during the public comment period following the publication of the proposed stage and the agency response are including in Attachment A.

All changes made in this regulatory action

Please detail all changes that are being proposed and the consequences of the proposed changes. Detail new provisions and/or all changes to existing sections.

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
9VAC25-20-20		Purpose.	Replace the term "sewage sludge" with "biosolids". (Twice in section.) Revised to be consistent with common usage and to use consistent terminology throughout the regulations.
9VAC25-20-60 A 4		"4. Permit maintenance fees shall be paid to the board by October 1 of each	Add terminology to clarify requirements for all permitted biosolids activities: for facilities that are authorized to land apply, distribute

		year. Additional permit maintenance fees for facilities in a toxics management program, and for facilities that have more than five process wastewater discharge outfalls at a single facility (not including "internal" outfalls) shall also be paid by October 1 of each year..."	or market biosolids. Revise to read: "4. Permit maintenance fees shall be paid to the board by October 1 of each year. Additional permit maintenance fees for facilities <u>that are authorized to land apply, distribute or market biosolids, are in a</u> toxics management program, and for facilities that <u>or</u> have more than five process wastewater discharge outfalls at a single facility (not including "internal" outfalls) shall also be paid by October 1 of each year..."
9VAC25-20-60 A 4		"...No permit will be reissued or automatically continued without payment of the required fee."	Make correction to terminology: "...No permit will be reissued or automatically <u>administratively</u> continued without payment of the required fee."
9VAC25-20-60 B		"B. Surface Water Withdrawal (SWW) and Ground Water Withdrawal (GWW) permits."	The term Ground Water was revised to "groundwater". To clarify requirements and to conform to common usage of terms. Revised to read: "B. Surface Water Withdrawal (SWW) and Ground Water <u>Groundwater</u> Withdrawal (GWW) permits."
9VAC25-20-60 B 1		"1. All permit application fees are due on the day an application is submitted...No permit will be automatically continued without payment of the required fee."	Make correction to terminology. Replace "automatically" with "administratively": "1. All permit application fees are due on the day an application is submitted...No permit will be automatically <u>administratively</u> continued without payment of the required fee."
9VAC25-20-60 D		"D. Sewage sludge land application fees. Except as specified in this regulation, all fees are due on the day specified by the department. Payment of the fee shall be made by land appliers following notification by the department of the fee due. No permit or modification of an existing permit will be approved in the jurisdiction where payment of the established fee by the land applier has not been received by the due date; until such time that the fees are paid in full. Existing permit may be revoked or approved sources may be	Revise to replace "sewage sludge" with "biosolids" and to conform to common practice within the program. "D. Sewage sludge <u>Biosolids</u> land application fees. Except as specified in this regulation, all fees are due on the day specified by the department. Payment of the fee shall be made by land appliers following notification by the department of the fee due. The department may bill the land applier for amounts due following the submission of the monthly land application report. <u>Payments are due 30 days after receipt of a bill from the department.</u> No permit or modification of an existing permit will be approved in the jurisdiction where payment of the established fee by the land applier has not been received by the due date; until such time that the fees are paid in full. Existing permit may be revoked or approved sources may be reclassified as

		reclassified as unapproved unless the required fee is paid within 60 days of the notification by the department of the fee due."	unapproved unless the required fee is paid within 60 days of the notification by the department of the fee due. <u>by the due date.</u> <u>No permit will be reissued or administratively continued or modified without full payment of any past due fee."</u>
9VAC25-20-70 A		Method of payment. "A. Fees shall be paid...All fees shall be sent to the following address (or submitted electronically, if available): Department of Environmental Quality, Receipts Control, P.O. Box 10150, Richmond, Virginia 23240."	Address correction: "A. Fees shall be paid...All fees shall be sent to the following address (or submitted electronically, if available): Department of Environmental Quality, Receipts Control, P.O. Box 10150 <u>1104</u> , Richmond, Virginia 23240 <u>23218</u> ."
9VAC25-20-90 A		Deposit and use of fees. Sludge Management Fund.	Replace the term "sewage sludge" with "biosolids". (Four times in subsection.) Revised to be consistent with common usage and to use consistent terminology throughout the regulations.
9VAC25-20-110 A		A. Virginia Pollutant Discharge Elimination (VPDES) permits. Fee schedule: "VPDES Municipal Minor/1,000 GPD or less that includes authorization for land application or land disposal of sewage sludge" (\$5,000)	Add terminology to clarify requirements for all permitted biosolids activities: "VPDES Municipal Minor/1,000 GPD or less that includes <u>– The authorization for land application, distribution or marketing of biosolids</u> or land disposal of sewage sludge" (\$5,000)
9VAC25-20-110 A		A. Virginia Pollutant Discharge Elimination (VPDES) permits. Fee schedule: Footnote: "For a new VPDES permit that includes authorization for land application or land disposal of sewage sludge, \$5,000 of the fee will be deposited into the Sludge Management Fund."	Add designation for footnote and revise footnote (\$5,000*) <u>"*For a new VPDES permit that includes authorization for land application, distribution or marketing of biosolids or land disposal of sewage sludge, the \$5,000 of the fee will be deposited into the Sludge Management Fund; biosolids permit fee will be paid in addition to the required VPDES permit fee.</u> "
9VAC25-20-110 B		B. Virginia Pollution Abatement (VPA) permits. The following fee schedules...(Note: Land application rates listed in the table below are facility "design" rates.)"	Delete current language contained in the "Note" because it is not relevant to VPA land application (VPDES only).
9VAC25-20-110 B		VPA permit fee schedule.	Add VPA Permit issuance fee for the authorization for land application of

			industrial sludge (excluding water treatment residuals) and municipal biosolids. New category based on permitting requests and confusion on the fee form. When applying for a permit that covers 2 categories – the highest fee applies.\$7500: " <u>VPA Combined Sludge Operation – Industrial Sludge (excluding water treatment plant residues) and Municipal Biosolids (\$7,500)</u> "
9VAC25-20-110 B		VPA permit fee schedule: "VPA Municipal Sludge Operation".	Revise fee schedule category to reflect common terminology usage: "VPA Municipal <u>Sludge Biosolids</u> Operation".
9VAC25-20-110 E		Ground Water Withdrawal (GWW) Permits issued in response to Chapter 25...	The term Ground Water was revised to "groundwater" in the section and associated fee schedule table. To clarify requirements and to conform to common usage of terms. (Total of three times in subsection.)
9VAC25-20-120 1		VPDES major modification fees schedule	Add fee category: " <u>VPDES Municipal – modification relating to the authorization for land application, distribution or marketing of biosolids or land disposal of sewage sludge (\$1,000)</u> "
9VAC25-20-120 1		VPDES major modification fees schedule footnote: "The fee for modification of a VPDES permit due to changes relating to authorization for land application or land disposal of sewage sludge shall be \$1,000 when a public meeting is required as specified in 9VAC25-31-290."	Add footnote designation to fee and revise language: The modification fee shall apply for any addition of land application sites to a permit. Revision is based on elimination of maintenance fee and the cost of the department providing notification when adding any land. (\$1,000*) " <u>The fee for modification of a VPDES permit due to changes relating to authorization for land application, distribution or marketing of biosolids or land disposal of sewage sludge shall be \$1,000 when a public meeting is required as specified in 9VAC25-31-290, notwithstanding other modification fees incurred. The modification fee shall apply for any addition of land application sites to a permit.</u> "
9VAC25-20-120 2		"2. Virginia Pollution Abatement (VPA) permits. The application fees listed... (Note: Land application rates listed in the table below are facility "design" rates.)"	Delete current language contained in the "Note" because it is not relevant to VPA land application (VPDES only).
9VAC25-20-120 2		VPA Permit fee schedule –	Add footnote designation to fee: "VPA

		"VPA Industrial Sludge Operation (\$3,750)"	Industrial Sludge Operation (\$3,750 ¹)" To clarify requirements.
9VAC25-20-120 2		VPA Permit fee schedule	VPA Permit modification fee for the authorization for land application of industrial sludge (excluding water treatment residuals) and municipal biosolids. New category based on permitting requests and confusion on the fee form. When applying for modification of a permit that covers 2 categories – the highest fee applies \$3750. Add fee category: " <u>VPA Combined Sludge Operation 0 Industrial Sludges (excluding water treatment plant residuals) and Municipal Biosolids (\$3,750¹)</u> "
9VAC25-20-120 2		VPA Permit fee schedule – "VPA Municipal Sludge Operation (\$1,000*)"	Replace "sludge" with "biosolids" and add two footnote designations to fee: "VPA Municipal <u>Sludge Biosolids</u> Operation (\$1,000 ^{1,2})"
9VAC25-20-120 2		VPA major modification fee	Add footnote: " ¹ <u>The modification fee shall apply for any addition of land application sites to a permit.</u> " To clarify requirements.
9VAC25-20-120 2		VPA major modification fee	Add new footnote to clarify addition of sources that cause the permitted category to change. " ² <u>When adding any industrial source (excluding water treatment plant residuals) to a permit that only authorizes the land application of municipal biosolids, the modification fee for a VPA combined sludge operation shall apply.</u> "
9VAC25-20-120 5		"5. Ground Water Withdrawal (GWW) Permits..."	The term Ground Water was revised to "groundwater" in the subdivision and associated fee schedule table. To clarify requirements and to conform to common usage of terms. (Total of three times in subdivision.)
9VAC25-20-142 A 1		VPDES permit maintenance fee for the authorization for land application of biosolids	Add terminology to clarify requirements for all permitted biosolids activities: permit maintenance fee for land application, distribution or marketing of biosolids. 2 changes made - in table and footnote
9VAC25-20-142 A 2		(Note: Land application rates listed in the table below are facility "design" rates.)	Delete current language from this section because it is not a relevant to VPA land application, only VPDES.
9VAC25-20-142 A 2		Maintenance fees	VPA Permit maintenance fee for permits authorizing for land application of industrial sludge (excluding water treatment residuals) and municipal biosolids. New category based on permitting requests and

			confusion on the fee form. Maintenance fee based on issuance fee: \$1231: Add new fee category: " <u>VPA Combined Sludge Operation – Industrial Sludges (excluding water treatment plant residuals) and Municipal Biosolids (\$1,231).</u> "
9VAC25-20-142 A 2		Maintenance fees; Base fee rates for VPA Permits: "VPA Municipal Sludge Operation (\$1,231)"	Revised fee category – replaced "sludge" with "biosolids". Changed fee to \$100 to reflect one tenth of the maximum fee authorized for reissuance by statute, § 62.1-44.19:3.F.: " VPA Municipal <u>Sludge Biosolids</u> Operation (\$1,231 \$100)
9VAC25-20-142 A 3		3. The amount of the annual permit maintenance fee...where...	Capitalized "Where:" Grammatical correction.
9VAC25-20-142 A 3		"B = the base fee rate for the type of VPDES or VPA permit from subdivisions 1 or 2 of this subsection..."	Grammatical correction. Replace "subdivisions" with "subdivision".
9VAC25-20-142 C		"C. If the category of a facility (as described in 9VAC25-20-142 A 1 or 2) changes as the result of a permit modification..."	Revised to clarify subdivision reference: "C. If the category of a facility (as described in 9VAC25-20-142 A 1 or 2) (<u>as described in subdivision A 1 or A 2 of this section</u>) changes as the result of a permit modification..."
9VAC25-20-146		"Part IV Sewage Sludge Fees and Reimbursable Costs"	Replace the term "sewage sludge" with "biosolids" to reflect current terminology and usage of terms: "Part IV <u>Sewage Sludge Biosolids</u> Fees and Reimbursable Costs"
9VAC25-20-146 B 3		"B. 3. Disbursement of the established fees collected by the department shall be made to reimburse the Department of Conservation and Recreation's costs for implementation of the sewage sludge application program."	Replace the term "sewage sludge" with "biosolids" to reflect current terminology and usage of terms: "B. 3. Disbursement of the established fees collected by the department shall be made to reimburse the Department of Conservation and Recreation's costs for implementation of the <u>sewage sludge biosolids</u> application program."
9VAC25-20-147 A		"A. Records. Permittees shall maintain complete records of the land application activities and amounts of biosolids that they land apply in the Commonwealth of Virginia. Such records shall be maintained by the permittee in a form that is	Wording reordered to clarify requirements. "A. Records. Permittees shall maintain complete records of the land application activities and amounts of biosolids that they land apply in the Commonwealth of Virginia. Such records shall be maintained by the permittee <u>for five years after the date of the activity</u> in a form that is available for inspection by the department for five years after the date of the

		available for inspection by the department for five years after the date of the activity..."	activity..."
9VAC25-20-147 A		"A. Records...Records of land application activities shall include the following minimum information:"	Revise to read: "A. Records...Records of land application activities shall include the following <u>at</u> minimum information:"
9VAC25-20-147 A 1		"1. Name of permittee, DEQ permit number and dates of activity."	Add comma - grammatical correction. "1. Name of permittee, DEQ permit number, and dates of activity."
9VAC25-20-147 A 2		"2. Identification of land application site, including the county where taxes are remitted and permitted site identification name, letters and numbers, as appropriate."	Revise to refer to the DEQ control number which references the previously requested information. "2. Identification of land application site, including the county where taxes are remitted and permitted site identification name, letters and numbers, <u>as appropriate DEQ control number.</u> "
9VAC25-20-147 A 3		"3. The source of biosolids and approximate field area receiving those biosolids."	Delete the term "approximate", an accurate accounting of application area is required. "3. The source of biosolids and approximate field area receiving those biosolids."
9VAC25-20-147 A 5		"5. Dates and type of any interactions with local monitors and names of individuals involved in the interactions."	Delete the requirement - information not required.
9VAC25-20-147 A 6	9VAC25-20-147 A 5	"6. Name of responsible representative of permittee and a statement signed..."	Renumber to account for deletion of previous requirement: " 6.5. Name of responsible representative of permittee and a statement signed..."
9VAC25-20-147 B		"B. Reports and notification. The permittee shall submit a monthly report by the 15th day of the month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4 following the month that land application occurs..."	Revised and added language to clarify that report is due each month: submitted by the 15 th of each month for land application activity that occurred in the previous calendar month. Revised to read: "B. Reports and notification. The permittee shall submit a monthly report by the 15th day of the <u>each month for land application activity that occurred in the previous calendar month,</u> unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4..."
9VAC25-20-147 B		"B. Reports and notification...That report shall include the recorded information listed in subsection A of this section and present a calculation of	Revised to clarify requirements: "B. Reports and notification... That <u>The</u> report shall include (i) the recorded information listed in subsection A of this section and present (ii) a calculation of the total fee that is required in accordance with this

		the total fee that is required in accordance with this regulation. The submitted report..."	regulation. The submitted report..."
9VAC25-20-147 B		"B. Reports and notification...The submitted report shall include a summary list of the total amount of biosolids applied and the calculated fee based on the land-applied biosolids for each county in which land application occurred in alphabetical order by county."	Delete requirement for an "alphabetical listing" and add a requirement for submission of a report when "no land application occurs". Revised language: "B. Reports and notification...The submitted report shall include a summary list of the total amount of biosolids applied and the calculated fee based on the land-applied biosolids for each county in which land application occurred in alphabetical order by county. <u>If no land application occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred.</u> "
9VAC25-20-148	9VAC25-20-148 A	"Reimbursable local monitoring costs. The following describes the kinds of activities for which expenses may, if reasonable, be submitted for reimbursement:"	Insert subsection number and revise text to clarify requirements: Revised language: "Reimbursable local monitoring costs. The following describes the kinds of activities for which expenses may, if reasonable, <u>A. Reasonable expenses for the following types of activities may be submitted for reimbursement:</u> "
9VAC25-20-148 2	9VAC25-20-148 A 2	"2. Charges and expenses, including local travel for site monitoring, inspections, collection and delivery of samples to a nearby laboratory and examination of records."	Revise to specify type of samples. Revised language: "2. Charges and expenses, including local travel for site monitoring, inspections, collection and delivery of <u>biosolids or soil samples</u> to a nearby laboratory and examination of records."
	9VAC25-20-148 B		Add statement regarding charges that are ineligible for reimbursement. Added language: " <u>B. Charges for site monitoring not associated with determining compliance with state or federal law or regulation are ineligible for reimbursement.</u> "
9VAC25-20-149	9VAC25-20-149 A	"Reimbursement of local monitoring costs deemed reasonable by the department will be made in order of receipt of an acceptable invoice. Such invoices will be reimbursed for reasonable costs up to \$2.50, as adjusted, per dry ton of biosolids land	Insert subsection designation and revise to clarify process of reimbursement: Revised language: " <u>A. Reimbursement of local monitoring costs deemed reasonable by the department will be made in order of receipt of an acceptable invoice. Such invoices will be reimbursed for reasonable costs up to \$2.50, as adjusted, per dry ton of biosolids land applied in a county during the period of time in the submitted</u>

		applied in a county during the period of time in the submitted invoice..."	invoice..."
9VAC25-20-149	9VAC25-20-149 A	"...If sufficient revenue exists from the fees collected monthly, then invoiced claims exceeding \$2.50, as adjusted, per dry ton of biosolids land applied in that county, during the period of time specified in the submitted invoice, may be released for reimbursement of up to \$4.00 per dry ton of biosolids land applied in that county during the month that the reimbursable costs were incurred, based on the order of receipt of the invoice."	Revise to clarify requirements and to reflect current practice. Revised language: "...If sufficient revenue exists from the fees collected monthly, then invoiced claims exceeding \$2.50, as adjusted, per dry ton of biosolids land applied in that county, during the period of time specified in the submitted invoice, may be released for reimbursement <u>Costs</u> of up to \$4.00 per dry ton of biosolids land applied in <u>that a</u> county during the <u>month</u> period of time that the reimbursable costs were incurred, based on the order of receipt of the invoice <u>may be reimbursed with prior approval from the department.</u> "
9VAC25-20-149 A	9VAC25-20-149 B	"A. Application. Local government must submit a reimbursement application to request reimbursement from the department. All information is to be clearly typed or printed..."	Renumber to account for insertion of new subsection number and revise to clarify requirement. Revised language: " <u>A. B.</u> Application. Local A <u>local</u> government must submit a reimbursement application to request reimbursement from the department. All information is to <u>shall be</u> clearly typed or printed..."
9VAC25-20-149 A	9VAC25-20-149 B	"...The original signed application with one copy of each of the supporting documents is to be forwarded to the department..."	Make correction to terminology: local monitor reimbursement application shall be submitted to the department. Revised language: "...The original signed application with one copy of each of the supporting documents is to <u>shall be forwarded</u> submitted to the department..."
9VAC25-20-149 B	9VAC25-20-149 C	"B. Application forms and submittal..."	Renumber subsection to account for insertion of new subsection number: Revised language: " <u>B. C.</u> Application forms and submittal..."
9VAC25-20-149 B 1	9VAC25-20-149 C 1	"1. Form 1...The invoice form should list all reimbursable charges..."	Renumbered to account for new subsection number. Replace "should" with "shall" to clarify that this is required not optional. Revise language: "1. Form 1...The invoice form should <u>shall</u> list all reimbursable charges..."
9VAC25-20-149 B 1	9VAC25-20-149 C 1	"1. Form 1...Include legible copies of invoices signed by the local biosolids	Revise to clarify. Revised language: "1. Form 1... Include legible copies of invoices <u>Invoices</u> signed by the local biosolids

		monitor or agent who performed or managed the monitoring activities..."	monitor or agent who performed or managed the monitoring activities <u>shall be legible...</u> "
9VAC25-20-149 B 1 b	9VAC25-20-149 C 1 b	"b. Number or site address;"	Revise to refer to DEQ control number. Revised language: "b. Number or site address <u>DEQ control number for application fields;</u> "
9VAC25-20-149 B 1 e	9VAC25-20-149 C 1 e	"e Name of biosolids monitor;"	Grammatical correction - insert "period". Revised language: "e. Name of biosolids monitor;"
9VAC25-20-149 B 1 g	9VAC25-20-149 C 1 g	"g. List of expenses for which reimbursement is sought;"	Grammatical correction – insert "and" to note final required item. Revised language: "g. List of expenses for which reimbursement is sought; <u>and</u> "
9VAC25-20-149 B 1 h	9VAC25-20-149 C 2	Statement after 9VAC25-20-149 B 1 h: "The application requires the county administrator to certify that the responsible official has read and understands the requirements for reimbursement..."	Insert subdivision designation to clarify requirements. Revised language: " <u>2.</u> The application requires the county administrator to certify that the responsible official has read and understands the requirements for reimbursement..."
9VAC25-20-149 B 2	9VAC25-20-149 C 3	"2. Form 2 - Multiple Owners Payment Assignment Form..."	Renumber to account for insertion of new subdivisions and renumbering. Revised language: " 2. <u>3.</u> Form 2 - Multiple Owners Payment Assignment Form..."
9VAC25-20-149 B 2		Text following 9VAC25-20-149 B 2: "Submittal of the original completed reimbursement application, including the application worksheets and the appropriate supporting documentation, should be accomplished by mailing these documents to..."	Delete text - duplicative requirement.
9VAC25-20-149 C	9VAC25-20-149 D	"C. Processing applications."	Renumber to account for revised numbering. Revised language: " C. <u>D.</u> Processing applications."
9VAC25-20-149 C 1	9VAC25-20-149 D 1	"1. If contacted by the department regarding an incomplete reimbursement application, an applicant will have 14 days from the date of the call or letter to submit the information requested and cure any deficiencies..."	Replace "cure" with "correct" to clarify requirements. Revised language: "1. If contacted by the department regarding an incomplete reimbursement application, an applicant will have 14 days from the date of the call or letter to submit the information requested and cure <u>correct</u> any deficiencies..."

9VAC25-20-149 C 1	9VAC25-20-149 D 1	"1. If contacted...An application that does not contain all of the required information after the 14-day time frame may be rejected or processed "as is," which can result in complete denial or a partial reimbursement."	Revised to clarify requirements and to reflect current practice. Revised language: "1. If contacted...An application that does not contain all of the required information after the 14-day time frame may be rejected or processed "as is," which can result in complete denial or a partial reimbursement."
9VAC25-20-149 C 2	9VAC25-20-149 D 2	"2. Only invoices pertaining to monitoring...Likewise, invoices submitted in previous claims will not be eligible documentation for reimbursement of costs in subsequent claims..."	Revise to clarify. Revised language: "2. Only invoices pertaining to monitoring...Likewise, <u>invoices</u> <u>invoices</u> submitted in previous claims <u>will</u> <u>are</u> not be eligible documentation for reimbursement of costs in subsequent claims..."
9VAC25-20-149 D	9VAC25-20-149 E	"D. Reconsideration process."	Renumber. Revised language: " <u>D</u> . <u>E</u> . Reconsideration process."
9VAC25-20-149 D 1	9VAC25-20-149 E 1	"1. Claimants may submit a written response indicating why costs denied on the reimbursement decision should be paid."	Revise to clarify. Revised language: "1. Claimants may submit a written response indicating why <u>they believe</u> costs denied on the reimbursement decision should be paid."
9VAC25-20-149 D 2	9VAC25-20-149 E 2 a	"If filing deadlines are not met, the decision in the reimbursement payment package is final. This written objection is to be in the format specified in the reconsideration procedure package and explain the reasons for disagreement with the decisions in the reimbursement payment letter and supply any additional supporting documentation."	Create a separate subdivision and revise to clarify. Revise language: " <u>a</u> . If filing deadlines are not met, the decision in the reimbursement payment package is final. This written objection is to <u>shall</u> be in the format specified in the reconsideration procedure package and explain the reasons for disagreement with the decisions in the reimbursement payment letter and supply any additional supporting documentation."
9VAC25-20-149 D 2	9VAC25-20-149 E 2 b	"Upon receipt of this information and at the claimant's request, the department may schedule a reconsideration meeting to reevaluate the denied costs."	Create a separate subdivision to clarify requirements. Revised language: " <u>b</u> . Upon receipt of this information and at the claimant's request, the department may schedule a reconsideration meeting to reevaluate the denied costs."
9VAC25-20-149 D 4	9VAC25-20-149 E 4	"4. The reconsideration procedures provide the department the opportunity to correct certain errors. The following types of	Renumber and revise to clarify. Revised language: "4. The reconsideration procedures provide the department the opportunity to correct certain errors. The following types of errors can be corrected

		errors can be corrected:"	as follows:"
9VAC25-20-149 D 5	9VAC25-20-149 E 5	"5. Notwithstanding the above, some types of errors cannot be corrected. It is the responsibility of the claimant or consultant, or both, to ensure that all application forms (invoice forms, and sampling and testing verification) are completely and accurately filled out. Failure to exercise proper care in preparing an application may result in a denial of costs, which cannot be corrected through the reconsideration process, including:"	Renumber and revise to clarify. Revised language: "5. <u>Errors ineligible for reconsideration.</u> Notwithstanding the above, some types of errors cannot be corrected. It is the responsibility of the claimant or consultant, or both, to ensure that all application forms (invoice forms, and sampling and testing verification) are completely and accurately filled out <u>complete and accurate.</u> Failure to exercise proper care in preparing an application <u>The following types of errors</u> may result in a denial of costs, which cannot be corrected through the reconsideration process, including:"
9VAC25-20-149 D 5 a	9VAC25-20-149 E 5 a	"a. Items omitted from the invoice form will not be eligible for reimbursement."	Renumbered and revised to delete redundant terminology. Revised language: "a. Items omitted from the invoice form will not be eligible for reimbursement. ;"
9VAC25-20-149 D 5 b	9VAC25-20-149 E 5 b	"b. Unverified sampling and testing results will not be eligible for reimbursement."	Renumbered and revised to delete redundant terminology. Revised language: "b. Unverified sampling and testing results will not be eligible for reimbursement. ;"
9VAC25-20-149 D 5 c	9VAC25-20-149 E 5 c	"c. No additions or revisions to the invoice forms will be accepted from the claimant after the reviewer forwards the verification package to the department."	Renumbered and revised to clarify. Revised language: "c. No additions <u>Additions</u> or revisions to the invoice forms will be accepted from the claimant <u>submitted</u> after the reviewer forwards the verification package to the department.;"
9VAC25-20-149 D 5 d	9VAC25-20-149 E 5 d	"d. Using one invoice in multiple claims. Invoices submitted in an application cannot be used as documentation for reimbursement of costs in subsequent claims."	Renumbered and revised to clarify. Revised language: "d. Using one invoice in multiple claims. Invoices submitted in an application cannot be used as documentation for reimbursement of costs in subsequent claims.;"
9VAC25-20-149 D 5 e		"e. The following are types of errors that cannot be corrected:"	Delete text - redundant.
9VAC25-20-149 D 5 e (1)	9VAC25-20-149 E 5 e	"(1) Failure to claim performed work on the invoice."	Renumbered and revised to clarify. Revised language: " (1) e. <u>Failure to claim performed work on the invoice.</u> form.;"
9VAC25-20-149 D 5 e (2)	9VAC25-20-149 E 5 f	"(2) Failure to claim sampling and testing costs as authorized."	Renumbered and revised to clarify. Revised language: " (2) f. <u>Failure to claim sampling and testing costs as authorized.</u> ;"

			or"
9VAC25-20-149 D 5 e (3)		"(3) Failure to claim all costs in a submitted invoice.	Delete subdivision. Requirement already addressed.
9VAC25-20-149 D 5 e (4)		"(4) Failure to submit to the reviewer all supporting documentation to demonstrate the necessity of work performed that exceeds expected activities. Such documentation must be submitted before the reviewer forwards the verification package to the department."	Delete subdivision.
	9VAC25-20-149 E 5 g		Add new requirement to clarify process. New language: "g. Failure to obtain prior approval from the department for costs that exceed \$2.50 per dry ton of biosolids land applied."
9VAC25-31-10		Buffer, Buffer zone	The term buffer was replaced with setback distance and the term buffer zone was replaced with setback area throughout the regulation
9VAC25-31-10		Operations management plan	Revised term to biosolids management plan throughout regulation based on comment that the term was too easily confused with the term Operations and Maintenance Manual
9VAC25-31-10		Definitions: "Act" means Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC § 1251 et seq."	Add "CWA" to definition. Revise to read: Definitions: "Act" means Federal Water Pollution Control Act, also known as the Clean Water Act (<u>CWA</u>), as amended, 33 USC § 1251 et seq." Based on discussions with the AG's Office.
9VAC25-31-10		Definitions: "Applicable standards and limitations" means all state, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the Clean Water Act (CWA) (33 USC § 1251 et seq.) and the law, including effluent limitations, water quality standards, standards of	Revised to read: "Applicable standards and limitations" means all state, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the Clean Water Act (CWA) <u>CWA</u> (33 USC § 1251 et seq.) and the law, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under §§ 301, 302, 303, 304, 306, 307, 308, 403 and 405 of

		performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under §§ 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.	CWA." Based on discussions with the AG's Office and to clarify requirements.
9VAC25-31-10		Definitions.	Added definition: " <u>Biosolids</u> " means <u>a sewage sludge that has received an established treatment and is managed in a manner to meet the required pathogen control and vector attraction reduction, and contains concentrations of regulated pollutants below the ceiling limits established in 40 CFR Part 503 and 9VAC25-31-540, such that it meets the standards established for use of biosolids for land application, marketing, or distribution in accordance with this regulation. Liquid biosolids contains less than 15% dry residue by weight. Dewatered biosolids contains 15% or more dry residue by weight.</u> " Based on discussions with the AG's Office.
9VAC25-31-10		Definitions: "CWA" means the Clean Water Act (33 USC § 1251 et seq.) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95, 217, Public Law 95-576, Public Law 96-483, and Public Law 97-117.	Revised to add new reference to Public Law 100-4: Revised to read: "CWA" means the Clean Water Act (33 USC § 1251 et seq.) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95, 217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, and Public Law 100-4." Revised to update Public Law references.
9VAC25-31-10		Definitions: "Land application area" means land under control of an AFO owner or operator, that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied."	Added "means in regard to AFO" because land application area is different when used in regard to biosolids. Revised language: " <u>Land application area</u> " means, <u>in regard to an AFO</u> , land under control of an AFO owner or operator, that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied." Based on comment
9VAC25-31-10		Definitions:	Added new definition: " <u>Land application area</u> " means, in regard to biosolids, the

			<u>area in the permitted field, excluding the buffer zones, where biosolids may be applied.</u> " Based on comment.
9VAC25-31-10		Definitions.	Added definition: " <u>Malodor</u> " means an <u>unusually strong or offensive odor associated with biosolids or sewage sludge as distinguished from odors normally associated with biosolids or sewage sludge.</u> " Added to define term used in section. Based on discussions with AG's Office.
9VAC25-31-10		Definitions. "National Pollutant Discharge Elimination System (NPDES)" means..."	Formatting correction. Revised language: "National Pollutant Discharge Elimination System (NPDES) <u>System</u> " or "NPDES" means..."
9VAC25-31-10		Definitions: Publicly owned treatment works	Definition was listed twice, deleted the definition that was between Pollutant and POTW treatment Plant. Based on comment
9VAC25-31-10		Definitions	New Definition " <u>Setback area</u> " means the <u>area of land between the boundary of the land application area and adjacent features where biosolids or other managed pollutants may not be land applied.</u> " Added to clarify changes to buffers and buffer language in the regulation.
9VAC25-31-10		Definitions. "Sewage sludge use" or "disposal practice" means the collection, storage, treatment, transportation, processing, monitoring, use or disposal of sewage sludge."	Revise to include "use of biosolids". Revised language: "Sewage sludge use" or "disposal practice" means the collection, storage, treatment, transportation, processing, monitoring, <u>use of biosolids</u> or disposal of sewage sludge."
9VAC25-31-10		Definitions. "Sludge-only facility" means any treatment works treating domestic sewage whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to the law and § 405(d) of the CWA, and is required to obtain a VPDES permit."	Revise to include "biosolids use". Revised language: "Sludge-only facility" means any treatment works treating domestic sewage whose methods of <u>biosolids use or sewage sludge use</u> or disposal are subject to regulations promulgated pursuant to the law and § 405(d) of the CWA, and is required to obtain a VPDES permit."
9VAC25-31-10		Definitions. "Standards for sewage sludge use or disposal" means the regulations promulgated pursuant to the law and §	Revise to include "biosolids use". Revised language: "Standards for <u>biosolids use or sewage sludge use or disposal</u> " means the regulations promulgated pursuant to the law and § 405(d) of the CWA which govern

		405(d) of the CWA which govern minimum requirements for sludge quality, management practices, and monitoring and reporting applicable to sewage sludge or the use or disposal of sewage sludge by any person."	minimum requirements for sludge quality, management practices, and monitoring and reporting applicable to sewage sludge or the use of <u>biosolids</u> or disposal of sewage sludge by any person."
9VAC25-31-10		Definitions	Added New Definition " <u>Vegetated buffer</u> " means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters." Added to clarify changes to buffers and buffer language in the regulation.
9VAC25-31-10		Definitions. "Virginia Pollutant Discharge Elimination System (VPDES) permit" means a document issued by the board pursuant to this chapter authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters and the use or disposal of sewage sludge. Under the approved state program, a VPDES permit is equivalent to an NPDES permit."	Revise to include the "use of biosolids". Revised language: "Virginia Pollutant Discharge Elimination System (VPDES) permit" means a document issued by the board pursuant to this chapter authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters and the use of <u>biosolids</u> or disposal of sewage sludge. Under the approved state program, a VPDES permit is equivalent to an NPDES permit."
9VAC25-31-60 A			Added title of subsection to clarify contents of subsection. New language: "A. <u>Compliance with a permit.</u> "
9VAC25-31-60 A 1		"1. Except for any toxic effluent standards and prohibitions imposed under § 307 of the CWA and standards for sewage sludge use or disposal under § 405(d) of the CWA..."	Revise to include "biosolids use". Revised language: "1. Except for any toxic effluent standards and prohibitions imposed under § 307 of the CWA and standards for <u>biosolids use or sewage sludge use or disposal</u> under § 405(d) of the CWA..."
9VAC25-31-60 A		"2. Compliance with a	Revise to include "biosolids use". Revised

2		<p>permit condition which implements a particular standard for sewage sludge use or disposal shall be an affirmative defense in any enforcement action brought for a violation of that standard for sewage sludge use or disposal pursuant to the law and §§ 309 and 405(e) of the CWA."</p>	<p>language: "2. Compliance with a permit condition which implements a particular standard for <u>biosolids use or sewage sludge use or disposal</u> shall be an affirmative defense in any enforcement action brought for a violation of that standard for <u>biosolids use or sewage sludge use or disposal</u> pursuant to the law and §§ 309 and 405(e) of the CWA."</p>
9VAC25-31-100 A		<p>"A. Duty to apply. Any person who discharges or proposes to discharge pollutants or who owns or operates a sludge only facility whose sewage sludge use or disposal practice is regulated by 9VAC25-31-420 through 9VAC25-31-720 and who does not have an effective permit, except person covered by general permits, excluded from the requirement for a permit by this chapter, or a user of a privately owned treatment works unless the board requires otherwise, shall submit a complete application to the department in accordance with this section. The requirements for concentrated animal feeding operations are described in subdivisions C 1 and 3 of 9VAC25-31-130."</p>	<p>Revised and reorganized to clarify requirements. Information moved into subdivisions to clarify. Revised language: "A. Duty to apply. Any person who discharges or proposes to discharge pollutants or who owns or operates a sludge only facility whose sewage sludge use or disposal practice is regulated by 9VAC25-31-420 through 9VAC25-31-720 and who does not have an effective permit, except person covered by general permits, excluded from the requirement for a permit by this chapter, or a user of a privately owned treatment works unless the board requires otherwise, <u>The following shall submit a complete application to the department in accordance with this section. The requirements for concentrated animal feeding operations are described in subdivisions C 1 and 3 of 9VAC25-31-130.</u>"</p>
	9VAC25-31-100 A 1		<p>Add new language to clarify requirements: New language: "<u>1. Any person who discharges or proposes to discharge pollutants; and</u>"</p>
	9VAC25-31-100 A 2		<p>Add new language to clarify requirements: New language: "<u>2. Any person who owns or operates a sludge-only facility whose biosolids use or sewage sludge disposal practice is regulated by 9VAC25-31-420 through 9VAC25-31-720 and who does not</u></p>

			have an effective permit."
	9VAC25-31-100 B		Add new subsection to address exceptions. New language added: " <u>B. Exceptions: The following are not required to submit a complete application to the department in accordance with this section unless the board requires otherwise:</u> "
	9VAC25-31-100 B 1		Add new subdivision to specify an exception. New language added: " <u>1. Persons covered by general permits;</u> "
	9VAC25-31-100 B 2		Add new subdivision to specify an exception. New language added: " <u>2. Persons excluded from the requirement for a permit by this chapter; or</u> "
	9VAC25-31-100 B 3		Add new subdivision to specify an exception. New language added: " <u>3. A user of a privately owned treatment works.</u> "
9VAC25-31-100 B	9VAC25-31-100 C		Renumbered and revised to account for insertion of new subsection and to clarify requirements. Revised language: " B.-C. Who applies. When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit. "
	9VAC25-31-100 C 1		Add new subdivision to clarify and specify who needs to apply for a permit. New language: " <u>1. The owner of the facility or operation.</u> "
	9VAC25-31-100 C 2		Add new subdivision to clarify and specify who needs to apply for a permit. Originally part of 9VAC25-31-100 B. New language: " <u>2. When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.</u> "
	9VAC25-31-100 C 3		Add new subdivision to clarify and specify who needs to apply for a permit. New language: " <u>3. Notwithstanding the requirements of subdivision 2 of this subsection, biosolids land application by the operator may be authorized by the owner's permit.</u> "
9VAC25-31-100 C	9VAC25-31-100 D	"C. Time to apply."	Subsection renumbered to account for inclusion of new subsection. Revised language: " C.-D. Time to apply."
9VAC25-31-100 C 2	9VAC25-31-100 D 2	"2. All TWTDS whose sewage sludge use or disposal practices are regulated by 9VAC25-31-420 through 9VAC25-31-	Subdivision renumbered to account for inclusion of new subsection. Language revised to include the concept of "biosolids use" and "sewage sludge disposal". Revised language: "2. All TWTDS whose

		720..."	sewage sludge biosolids use or sewage sludge disposal practices are regulated by 9VAC25-31-420 through 9VAC25-31-720..."
9VAC25-31-100 C 2 b	9VAC25-31-100 D 2 b	"b. Any other TWTDS not addressed under subdivision 2 a of this subsection must submit...a standard applicable to its sewage sludge use or disposal practice(s), using a form provided by the department..."	Subdivision renumbered to account for inclusion of new subsection. Language revised to include the concept of "biosolids use" and "sewage sludge disposal". Revised language: "b. Any other TWTDS not addressed under subdivision 2 a of this subsection must submit...a standard applicable to its sewage sludge biosolids use or sewage sludge disposal practice(s) practice or practices, using a form provided by the department..."
9VAC25-31-100 C 2 b (3)	9VAC25-31-100 D 2 b (3)	"(3) A description of the sewage sludge use or disposal practices. Unless the sewage sludge meets the requirements of subdivision P 8 d of this section, the description must include the name and address of any facility where sewage sludge is sent for treatment or disposal and the location of any land application sites;"	Subdivision renumbered to account for inclusion of new subsection. Language revised to include the concept of "biosolids use" and "sewage sludge disposal". Subdivision reference corrected. Revised language: "(3) A description of the sewage sludge biosolids use or sewage sludge disposal practices . Unless the sewage sludge biosolids meets the requirements of subdivision P 8 d Q 9 d of this section, the description must include the name and address of any facility where biosolids or sewage sludge is sent for treatment or disposal and the location of any land application sites;"
9VAC25-31-100 C 2 b (5)	9VAC25-31-100 D 2 b (5)	"(5) The most recent data the TWTDS may have on the quality of the sewage sludge."	Subdivision renumbered to account for inclusion of new subsection. Language revised to include the reference to "biosolids". Revised language: "(5) The most recent data the TWTDS may have on the quality of the biosolids or sewage sludge."
9VAC25-31-100 C 2 d	9VAC25-31-100 D 2 d	"d. Any TWTDS that commences operations after promulgation of an applicable standard for sewage sludge use or disposal shall submit an application..."	Subdivision renumbered to account for inclusion of new subsection. Language revised to include the concept of "biosolids use" and "sewage sludge disposal". Revised language: "d. Any TWTDS that commences operations after promulgation of an applicable standard for sewage sludge biosolids use or sewage sludge disposal shall submit an application..."
9VAC25-31-100 D	9VAC25-31-100 E	"D. Duty to reapply."	Subsection renumbered to account for inclusion of new subsection. Revised language: " D. E. Duty to reapply."
9VAC25-31-100	9VAC25-	"E. Completeness."	Subsection and associated subdivisions

E	31-100 F		renumbered to account for inclusion of new subsection. Revised language: " E-F . Completeness."
9VAC25-31-100 E 5	9VAC25-31-100 F 5	"5. In accordance with § 62.1-44.19:3 A of the Code of Virginia, no application for a permit or variance to authorize the storage of sewage sludge shall be complete unless it contains certification from the governing body of the locality in which the sewage sludge is to be stored that the storage site is consistent with all applicable ordinances..."	Subdivisions renumbered to account for inclusion of new subsection. Revised to replace the term "sewage sludge" with "biosolids" to reflect current terminology. Revised language: "5. In accordance with § 62.1-44.19:3 A of the Code of Virginia, no application for a permit or variance to authorize the storage of sewage sludge <u>biosolids</u> shall be complete unless it contains certification from the governing body of the locality in which the sewage sludge <u>biosolids</u> is to be stored that the storage site is consistent with all applicable ordinances..."
	9VAC25-31-100 F 6		Add new language related to "written consent of landowner". New language: " <u>6. No application for a permit to land apply biosolids in accordance with Part VI (9VAC25-31-420 et seq.) of this chapter shall be complete unless it includes the written consent of the landowner to apply biosolids on his property.</u> "
9VAC25-31-100 F	9VAC25-31-100 G	"F. Information requirements. All applicants for VPDES permits, other than POTWs and other TWTDS, shall provide the following information to the department, using the application form provided by the department (additional information required of applicants is set forth in subsections G through K of this section)."	Subsection and associated subdivisions renumbered to account for inclusion of new subsection. Revised subsection references to account for renumbering of subsections. Revised language: " F-G . Information requirements. All applicants for VPDES permits, other than POTWs and other TWTDS, shall provide the following information to the department, using the application form provided by the department (additional information required of applicants is set forth in subsections G <u>H</u> through K <u>L</u> of this section)."
9VAC25-31-100 G	9VAC25-31-100 H	"G. Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial mining, and silvicultural dischargers applying for VPDES permits, except for those facilities subject to the requirements of 9VAC25-31-100 H, shall	Subsection and associated subdivisions renumbered to account for inclusion of new subsection. Revised subsection reference. Revised language: " G-H . Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial mining, and silvicultural dischargers applying for VPDES permits, except for those facilities subject to the requirements of 9VAC25-31-100 H <u>subsection I</u> of this section, shall provide

		provide the following information to the department, using application forms provided by the department."	the following information to the department, using application forms provided by the department."
9VAC25-31-100 G 7 a	9VAC25-31-100 H 7	"7. a. Information on the discharge of pollutants specified in this subsection (except information on storm water discharges which is to be provided as specified in 9VAC25-31-120)."	Subdivision renumbered to account for renumbering of subdivisions. Subdivision designation deleted. Revised language: "7. a . Information on the discharge of pollutants specified in this subsection (except information on storm water discharges which is to be provided as specified in 9VAC25-31-120)."
	9VAC25-31-100 H 7 a	"When quantitative data for a pollutant are required...The requirements in e and f of this subdivision that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water..."	Material in original 9VAC25-31-100 H 7 a moved to new subdivision with same designation to better organize requirements. Subdivision reference clarified. " <u>a</u> . When quantitative data for a pollutant are required...The requirements in e and f of this subdivision <u>7 e and f of this subsection</u> that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water..."
9VAC25-31-100 G 7 c	9VAC25-31-100 H 7 c (1) - (7)	"c. Every applicant must report quantitative data for every outfall for the following pollutants: Biochemical oxygen demand (BOD ₅), Chemical oxygen demand, Total organic carbon, Total suspended solids, Ammonia (as N), Temperature (both winter and summer, pH."	Subdivision renumbered to account for renumbering of subdivisions. Items identified in original 7 c broken out into separate list of pollutants. Grammatical correction. Semi-colon added to separate items and "period" added after item (7). Revised language: "c. Every applicant must report quantitative data for every outfall for the following pollutants: <u>(1)</u> Biochemical oxygen demand (BOD ₅); <u>(2)</u> Chemical oxygen demand; <u>(3)</u> Total organic carbon; <u>(4)</u> Total suspended solids; <u>(5)</u> Ammonia (as N); <u>(6)</u> Temperature (both winter and summer; <u>and</u> <u>(7)</u> pH."
9VAC25-31-100 G 7 e	9VAC25-31-100 H 7 e	"e. Each applicant with processes in one or more primary industry category (see 40 CFR Part 122 Appendix A (2005)) contributing to a discharge	Subdivision renumbered to account for renumbering of subdivisions. Revised to clarify exception. Revised language: "e. Each applicant with processes in one or more primary industry category (see 40 CFR Part 122 Appendix A (2005))

		must report quantitative data for the following pollutants in each outfall process wastewater."	contributing to a discharge must report quantitative data for the following pollutants in each outfall process wastewater, <u>except as indicated in subdivisions 7 c (3), (4), and (5) of this subsection.</u> "
9VAC25-31-100 G 7 e (1)	9VAC25-31-100 H 7 e (1)	"(1) The organic toxic pollutants in the fractions designated in Table I of 40 CFR Part 122 Appendix D (2005)...A determination that an applicant falls within a particular industrial category for the purposes of selecting fractions for testing is not conclusive as to the applicant's inclusion in that category for any other purposes; and"	Subdivision renumbered to account for renumbering of subdivisions. Revised to account for the inclusion of additional requirements. Revised language: "(1) The organic toxic pollutants in the fractions designated in Table I of 40 CFR Part 122 Appendix D (2005)...A determination that an applicant falls within a particular industrial category for the purposes of selecting fractions for testing is not conclusive as to the applicant's inclusion in that category for any other purposes; and. "
	9VAC25-31-100 H 7 e (3)		Add revised language (originally included as 9VAC25-31-100 Q – Note 1) related to suspension of specific requirements. New language: " <u>(3) Subdivision H 7 e (1) of this section and the corresponding portions of the VPDES application Form 2C are suspended as they apply to coal mines.</u> "
	9VAC25-31-100 H 7 e (4)		Add revised language (originally included as 9VAC25-31-100 Q – Note 2) related to suspension of specific requirements. New language: " <u>(4) Subdivision H 7 e (1) of this section and the corresponding portions of Item V-C of the VPDES application Form 2C are suspended as they apply to:</u> "
	9VAC25-31-100 H 7 e (4) (a)		Add revised language (originally included as 9VAC25-31-100 Q – Note 2 a) related to suspension of specific requirements. New language: " <u>(a) Testing and reporting for all four organic fractions in the Greige Mills Subcategory of the Textile Mills industry (subpart C-low water use processing of 40 CFR Part 410 (2005)) and testing and reporting for the pesticide fraction in all other subcategories of this industrial category.</u> "
	9VAC25-31-100 H 7 e (4) (b)		Add revised language (originally included as 9VAC25-31-100 Q – Note 2 b) related to suspension of specific requirements. New language: " <u>(b) Testing and reporting for the volatile, base/neutral and pesticide fractions in the Base and Precious Metals Subcategory of the Ore Mining and</u>

			<u>Dressing industry (subpart B of 40 CFR Part 440 (2005)), and testing and reporting for all four fractions in all other subcategories of this industrial category."</u>
	9VAC25-31-100 H 7 e (4) (c)		Add revised language (originally included as 9VAC25-31-100 Q – Note 2 c) related to suspension of specific requirements. New language: " <u>(c) Testing and reporting for all four GC/MS fractions in the Porcelain Enameling industry."</u>
	9VAC25-31-100 H 7 e (5)		Add revised language (originally included as 9VAC25-31-100 Q – Note 3) related to suspension of specific requirements. New language: " <u>(5) Subdivision H 7 3 (1) of this section and the corresponding portions of Item V-C of the VPDES application Form 2C are suspended as they apply to:"</u>
	9VAC25-31-100 H 7 e (5) (a)		Add revised language (originally included as 9VAC25-31-100 Q – Note 3 a) related to suspension of specific requirements. New language: " <u>(a) Testing and reporting for the pesticide fraction in the Tail Oil Rosin Subcategory (subpart D) and Rosin-Based Derivatives Subcategory (subpart F) of the Gum and Wood Chemicals industry (40 CFR Part 454 (2005)), and testing and reporting for the pesticide and base-neutral fractions in all other subcategories of this industrial category."</u>
	9VAC25-31-100 H 7 e (5) (b)		Add revised language (originally included as 9VAC25-31-100 Q – Note 3 b) related to suspension of specific requirements. New language: " <u>(b) Testing and reporting for the pesticide fraction in the leather tanning and finishing, paint and ink formation, and photographic supplies industrial categories."</u>
	9VAC25-31-100 H 7 e (5) (c)		Add revised language (originally included as 9VAC25-31-100 Q – Note 3 c) related to suspension of specific requirements. New language: " <u>(c) Testing and reporting for the acid, base/neutral, and pesticide fractions in the petroleum refining industrial category."</u>
	9VAC25-31-100 H 7 e (5) (d)		Add revised language (originally included as 9VAC25-31-100 Q – Note 3 d) related to suspension of specific requirements. New language: " <u>(d) Testing and reporting for the pesticide fraction in the Papergrade Sulfite</u>

			<p><u>Subcategories (subparts J and U) of the Pulp and Paper industry (40 CFR Part 430 (2005)); testing and reporting for the base/neutral and pesticide fractions in the following subcategories: Denik (subpart Q), Dissolving Kraft (subpart F), and Paperboard from Waste Paper (subpart E); testing and reporting for the volatile base/neutral, and pesticide fractions in the following subcategories: BCT Bleached Kraft (subpart H), Semi-Chemical (subparts B and C), and Nonintegrated-Fine Papers (subpart R); and testing and reporting for the acid, base/neutral, and pesticide fractions in the following subcategories: Fine Bleached Kraft (subpart I), Dissolving Sulfite Pulp (subpart K), Groundwood-Fine Papers (subpart O), Market Bleached Kraft (subpart G), Tissue from Wastepaper (subpart T), and Nonintegrated-Tissue Papers (subpart S)."</u></p>
	9VAC25-31-100 H 7 e (5) (e)		<p>Add revised language (originally included as 9VAC25-31-100 Q – Note 3 e) related to suspension of specific requirements. New language: "<u>(e) Testing and reporting for the base/neutral fraction in the Once-Through Cooling Water, Fly Ash and Bottom Ash Transport Water process waste streams of the Steam Electric Power Plant industrial category.</u>"</p>
9VAC25-31-100 G 7 f (1)	9VAC25-31-100 H 7 f	<p>"f. (1) Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in Table IV...is expected to be discharged."</p>	<p>Delete subdivision reference. Revised language: "f. (1) Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in Table IV...is expected to be discharged."</p>
9VAC25-31-100 G 7 f (2)	9VAC25-31-100 H 7 g	<p>"(2). Each applicant must indicate whether it knows or has reason to believe that any of the pollutants listed in Table II or Table III...Appendix D (2005) (the organic toxic pollutants)."</p>	<p>Change subdivision reference to account for subdivision renumbering. Revised language: "(2)-<u>g</u>. Each applicant must indicate whether it knows or has reason to believe that any of the pollutants listed in Table II or Table III...Appendix D (2005) (the organic toxic pollutants)."</p>
9VAC25-31-100 G 7 g	9VAC25-31-100 H 7 h	<p>"g. Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in Table V...and report any quantitative data it has for any pollutant."</p>	<p>Change subdivision reference to account for subdivision renumbering. Revised language: "g-<u>h</u>. Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in Table V...and report any quantitative data it has for any pollutant."</p>

9VAC25-31-100 G 7 h	9VAC25-31-100 H 7 i	"h. Each applicant must report qualitative data...if it:"	Change subdivision and associated references to account for subdivision renumbering. Revised language: " h. <u>i.</u> Each applicant must report qualitative data...if it:"
9VAC25-31-100 G 8	9VAC25-31-100 H 8	"8. An applicant which qualifies as a small business under one of the following criteria is exempt from the requirements in subdivision 7 e (1) or 7 f (1) of this subsection to submit quantitative data for the pollutants listed in Table II..."	Correct reference to account for renumbering of subdivisions. Revise language: "8. An applicant which qualifies as a small business under one of the following criteria is exempt from the requirements in subdivision 7 e (1) or 7 f (4) of this subsection to submit quantitative data for the pollutants listed in Table II..."
9VAC25-31-100 H	9VAC25-31-100 I	"H. Application requirements for manufacturing, commercial, mining and silvicultural facilities which discharge only nonprocess wastewater..."	Renumber to account for subsection renumbering. Revised language: " H. <u>I.</u> Application requirements for manufacturing, commercial, mining and silvicultural facilities which discharge only nonprocess wastewater..."
9VAC25-31-100 I	9VAC25-31-100 J	"I. Application requirements for new and existing concentrated animal feeding operations and aquatic animal production facilities..."	Renumber to account for subsection renumbering. Revised language: " I. <u>J.</u> Application requirements for new and existing concentrated animal feeding operations and aquatic animal production facilities..."
9VAC25-31-100 J	9VAC25-31-100 K	"J. Application requirements for new and existing POTWs and treatment works treating domestic sewage..."	Renumber to account for subsection renumbering. Revised language: " J. <u>K.</u> Application requirements for new and existing POTWs and treatment works treating domestic sewage..."
9VAC25-31-100 J 4 a	9VAC25-31-100 K 4 a	"4. Effluent monitoring for specific parameters. a. As provided in subdivisions 4 b through j of this subsection, all applicants must submit to the department effluent monitoring information for samples taken from each outfall..."	Renumber to account for subsection renumbering. Subdivision reference corrected. Revised language: "4. Effluent monitoring for specific parameters. a. As provided in subdivisions 4 b through <u>j</u> <u>4 k</u> of this subsection, all applicants must submit to the department effluent monitoring information for samples taken from each outfall..."
9VAC25-31-100 J 4 c	9VAC25-31-100 K 4 d	"Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent	Insert subdivision number for a portion of original 9VAC25-31-100 K 4 c to clarify and better organize the requirements. Revised language: " <u>d.</u> Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge

		may delete chlorine."	chlorine in their effluent may delete chlorine."
9VAC25-31-100 J 4 d	9VAC25-31-100 K 4 e	"d. All POTWs with a design flow rate equal to or greater than one million gallons per day..."	Renumber to account to insertion of new subdivision number. Revised language: " e. <u>e.</u> All POTWs with a design flow rate equal to or greater than one million gallons per day..."
9VAC25-31-100 J 4 e	9VAC25-31-100 K 4 f	"e. The board may require sampling for additional pollutants, as appropriate, on a case-by-case basis."	Renumber to account to insertion of new subdivision number. Revised language: " e. <u>f.</u> The board may require sampling for additional pollutants, as appropriate, on a case-by-case basis."
9VAC25-31-100 J 4 f	9VAC25-31-100 K 4 g	"f. Applicants must provide data from a minimum of three samples..."	Renumber to account to insertion of new subdivision number. Revised language: " f. <u>g.</u> Applicants must provide data from a minimum of three samples..."
9VAC25-31-100 J 4 g	9VAC25-31-100 K 4 h	"g. All existing data for pollutants specified in subdivisions 4 b through e of this subsection that is collected..."	Renumber to account to insertion of new subdivision number. Correct subdivision reference. Revised language: " g. <u>h.</u> All existing data for pollutants specified in subdivisions 4 b through e <u>4 f</u> of this subsection that is collected..."
9VAC25-31-100 J 4 h	9VAC25-31-100 K 4 i	"h. Applicants must collect samples of effluent and analyze such samples for pollutants..."	Renumber to account to insertion of new subdivision number. Revised language: " h. <u>i.</u> Applicants must collect samples of effluent and analyze such samples for pollutants..."
9VAC25-31-100 J 4 i	9VAC25-31-100 K 4 j	"i. The effluent monitoring data provided must include at least the following information for each parameter:"	Renumber to account to insertion of new subdivision number. Revised language: " i. <u>j.</u> The effluent monitoring data provided must include at least the following information for each parameter:"
9VAC25-31-100 J 4 j	9VAC25-31-100 K 4 k	"j. Unless otherwise required by the board, metals must be reported as total recoverable."	Renumber to account to insertion of new subdivision number. Revised language: " j. <u>k.</u> Unless otherwise required by the board, metals must be reported as total recoverable."
9VAC25-31-100 K	9VAC25-31-100 L	"K. Application requirements for new sources and new discharges..."	Renumber to account to insertion of new subsection number. Revised language: " K. <u>L.</u> Application requirements for new sources and new discharges..."
9VAC25-31-100 L	9VAC25-31-100 M	"L. Variance requests by non-POTWs..."	Renumber to account to insertion of new subsection number. Revised language: " L. <u>M.</u> Variance requests by non-POTWs..."
9VAC25-31-100 M	9VAC25-31-100 N	"M. Variance requests by POTWs..."	Renumber to account to insertion of new subsection number. Revised language: " M. <u>N.</u> Variance requests by POTWs..."
9VAC25-31-100	9VAC25-	"N. Expedited variance	Renumber to account to insertion of new

N	31-100 O	procedures and time extensions."	subsection number. Revised language: " N.O. Expedited variance procedures and time extensions."
9VAC25-31-100 N 1	9VAC25-31-100 O 1	"1. Notwithstanding the time requirements in subsection L and M of this section, the board may notify a permit applicant..."	Renumber to account to insertion of new subsection number. Subsection references corrected. Revised language: "1. Notwithstanding the time requirements in subsection L <u>M</u> and M <u>N</u> of this section, the board may notify a permit applicant..."
9VAC25-31-100 N 2	9VAC25-31-100 O 2	"2. A discharger who cannot file a timely complete request required under subdivisions L 2 a (2) or L 2 b of this section may request an extension..."	Renumber to account to insertion of new subsection number. Subsection references corrected. Revised language: "2. A discharger who cannot file a timely complete request required under subdivisions L 2 a (2) or L 2 b <u>M 2 a (2)</u> or <u>M 2 b</u> of this section may request an extension..."
9VAC25-31-100 O	9VAC25-31-100 P	"O. Recordkeeping. Except for information required by subdivision C 2 of this section..."	Renumber to account to insertion of new subsection number. Subsection references corrected. Revised language: " O. <u>P.</u> Recordkeeping. Except for information required by subdivision C 2 <u>D 2</u> of this section..."
9VAC25-31-100 P	9VAC25-31-100 Q	"P. Sewage sludge management. All TWTDS subject to subdivision C 2 a of this section..."	Renumber to account to insertion of new subsection number. Subsection references corrected. Revised language: " P. <u>Q.</u> Sewage sludge management. All TWTDS subject to subdivision C 2 a <u>D 2 a</u> of this section..."
9VAC25-31-100 P 3	9VAC25-31-100 Q 3	"3. All applicants must identify any generation, treatment, storage, land application or disposal of sewage sludge that occurs in Indian country."	Renumber to account to insertion of new subsection number. Revise to include concept of "land application of biosolids". Revised language: "3. All applicants must identify any generation, treatment, storage, land application <u>of biosolids</u> or disposal of sewage sludge that occurs in Indian country."
	9VAC25-31-100 Q 6		Add requirements for "an odor control plan". New language: " <u>6. All applicants must submit an odor control plan that contains at minimum:</u> "
	9VAC25-31-100 Q 6 a		Add requirements for contents of "an odor control plan". New language: " <u>a. Methods used to minimize odor in producing biosolids;</u> "
	9VAC25-31-100 Q 6 b		Add requirements for contents of "an odor control plan". New language: " <u>b. Methods used to identify malodorous biosolids before land application (at the generating facility);</u> "

	9VAC25-31-100 Q 6 c		Add requirements for contents of "an odor control plan". New language: " <u>c. Methods used to identify and abate malodorous biosolids that have been delivered to the field, prior to land application; and</u> "
	9VAC25-31-100 Q 6 d		Add requirements for contents of "an odor control plan". New language: " <u>d. Methods used to abate malodor from biosolids if land applied.</u> "
9VAC25-31-100 P 6	9VAC25-31-100 Q 7	"6. The applicant must submit sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in Part VI..."	Renumber to account to insertion of new subsection number. Revise to replace the term "sewage sludge" with "biosolids". Revised language: " 6. <u>7. The applicant must submit sewage sludge biosolids monitoring data for the pollutants for which limits in sewage sludge biosolids have been established in Part VI...</u> "
	9VAC25-31-100 Q 7 a		Add requirement related to new biosolids source. New language: " <u>a. When applying for authorization to land apply a biosolids source not previously included in a VPDES or Virginia Pollution Abatement Permit, the biosolids shall be sampled and analyzed for PCBs. The same results shall be submitted with the permit application or request to add the source.</u> "
9VAC25-31-100 P 7 a	9VAC25-31-100 Q 7 b	"a. The board may require sampling for additional pollutants, as appropriate, on a case-by-case basis."	Renumber to account for addition of new subdivision. Revised language: " a. <u>b.</u> The board may require sampling for additional pollutants, as appropriate, on a case-by-case basis."
9VAC25-31-100 P 7 b	9VAC25-31-100 Q 7 c	"b. Applicants must provide data from a minimum of three samples taken within 4-1/2 years prior to the date of permit application. Samples must be representative of the sewage sludge and should be taken at least one month apart..."	Renumber to account for addition of new subdivision. Replace term "sewage sludge" with "biosolids". Revised language: " b. <u>c.</u> Applicants must provide data from a minimum of three samples taken within 4-1/2 years prior to the date of permit application. Samples must be representative of the sewage sludge <u>biosolids</u> and should be taken at least one month apart..."
9VAC25-31-100 P 7 c	9VAC25-31-100 Q 7 d	"c. Applicants must collect and analyze samples in accordance with analytical methods specified in 9VAC25-31-490 unless an alternative has been specified in an existing sewage sludge permit."	Renumber to account for addition of new subdivision. Revise to clarify requirement and to provide CFR references (40 CFR Part 136 and VPA regulation require specific methods for biosolids sampling and analysis. Revised language: " <u>c.</u> Applicants must collect and analyze samples in accordance with analytical methods specified in 9VAC25-31-490

			unless an alternative has been specified in an existing sewage sludge permit, 40 CFR Part 503 (March 26, 2007) and 40 CFR Part 136 (March 26, 2007). "
9VAC25-31-100 P 7 d	9VAC25-31-100 Q 7 e	"d. The monitoring data provided must include at least the following information for each parameter:"	Renumber subdivisions and associated requirements to account for addition of new subdivision. Revised language: " d. <u>e.</u> The monitoring data provided must include at least the following information for each parameter:"
9VAC25-31-100 P 7	9VAC25-31-100 Q 8	"7. If the applicant is a person who prepares sewage sludge, as defined in 9VAC25-31-500, the applicant must provide the following information:"	Subdivision and associated subdivisions to account for addition of new subdivision. Revise to include "biosolids". Revised language: " 7. <u>8.</u> If the applicant is a person who prepares <u>biosolids or</u> sewage sludge, as defined in 9VAC25-31-500, the applicant must provide the following information:"
9VAC25-31-100 P 7 a	9VAC25-31-100 Q 8 a	"a. If the applicant's facility generates sewage sludge, the total dry metric tons per 365-day period generated at the facility."	Renumber subdivision and to account for addition of new subdivision. Revise to include "biosolids". Revised language: "a. If the applicant's facility generates <u>biosolids or</u> sewage sludge, the total dry metric tons per 365-day period generated at the facility."
9VAC25-31-100 P 7 b	9VAC25-31-100 Q 8 b	"b. If the applicant's facility receives sewage sludge from another facility, the following information for each facility from which sewage sludge is received:"	Renumber subdivision and to account for addition of new subdivision. Revise to include "biosolids". Revised language: "b. If the applicant's facility receives <u>biosolids or</u> sewage sludge from another facility, the following information for each facility from which <u>biosolids or</u> sewage sludge is received:"
9VAC25-31-100 P 7 c	9VAC25-31-100 Q 8 c	"c. If the applicant's facility changes the quality of sewage sludge through blending, treatment, or other activities, the following information:"	Renumber subdivision and to account for addition of new subdivision. Revise to include "biosolids". Revised language: "c. If the applicant's facility changes the quality of <u>biosolids or</u> sewage sludge through blending, treatment, or other activities, the following information:"
9VAC25-31-100 P 7 d	9VAC25-31-100 Q 8 d	"d. If sewage sludge from the applicant's facility meets the ceiling concentrations in 9VAC25-31-540 B 1, the pollutant concentrations in 9VAC25-31-540 B 3, the Class A pathogen requirements in 9VAC25-31-710 A, and one of the vector attraction	Renumber to account for addition of new subdivision. Replace term "sewage sludge" with "biosolids". Correct references to Tables. Revised language: "d. If sewage sludge <u>biosolids</u> from the applicant's facility meets the ceiling concentrations in 9VAC25-31-540 B [<u>Table</u>] 1, the pollutant concentrations in 9VAC25-31-540 B [<u>Table</u>] 3, the Class A pathogen requirements in 9VAC25-31-710 A, and

		reduction requirements in 9VAC25-31-720 B 1 through 8, and if the sewage sludge is applied to the land, the applicant must provide the total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land."	one of the vector attraction reduction requirements in 9VAC25-31-720 B 1 through 8, and if the sewage sludge biosolids is applied to the land, the applicant must provide the total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land."
9VAC25-31-100 P 7 e	9VAC25-31-100 Q 8 e	"e. If sewage sludge from the applicant's facility is sold or given away in a bag or other container for application to the land, and the sewage sludge is not subject to subdivision 7 d of this subsection, the applicant must provide the following information:"	Replace "sewage sludge" with "biosolids" and correct subdivision reference. Revised language: "e. If sewage sludge <u>biosolids</u> from the applicant's facility is sold or given away in a bag or other container for application to the land, and the sewage sludge <u>biosolids</u> is not subject to subdivision 7 d <u>8 d</u> of this subsection, the applicant must provide the following information:"
9VAC25-31-100 P 7 e (1)	9VAC25-31-100 Q 8 e (1)	"(1) The total dry metric tons per 365-day period of sewage sludge subject to this subsection that is sold or given away in a bag or other container for application to the land; and"	Replace term "sewage sludge" with "biosolids". Revised language: "(1) The total dry metric tons per 365-day period of sewage sludge <u>biosolids</u> subject to this subsection that is sold or given away in a bag or other container for application to the land; and"
9VAC25-31-100 P 7 e (2)	9VAC25-31-100 Q 8 e (2)	"(2) A copy of all labels or notices that accompany the sewage sludge being sold or given away."	Replace term "sewage sludge" with "biosolids". Revised language: "(2) A copy of all labels or notices that accompany the sewage sludge <u>biosolids</u> being sold or given away."
9VAC25-31-100 P 7 f	9VAC25-31-100 Q 8 f	"f. If sewage sludge from the applicant's facility is provided to another person who prepares sewage sludge, as defined in 9VAC25-31-500, and the sewage sludge is not subject to subdivision 7 d of this subsection, the applicant must provide the following information for each facility receiving the sewage sludge:"	Revise to include the term "biosolids" and replace the term "sewage sludge" with "biosolids" twice in the subdivision. Correct subdivision reference. Revised language: "f. If <u>biosolids</u> or sewage sludge <u>biosolids</u> from the applicant's facility is provided to another person who prepares sewage sludge <u>biosolids</u> , as defined in 9VAC25-31-500, and the sewage sludge <u>biosolids</u> is not subject to subdivision 7 d <u>8 d</u> of this subsection, the applicant must provide the following information for each facility receiving the sewage sludge:"
9VAC25-31-100 P 7 f (2)	9VAC25-31-100 Q 8 f (2)	"(2) The total dry metric tons per 365-day period of sewage sludge subject to	Revise to include the term "biosolids". Revised language: "(2) The total dry metric tons per 365-day period of <u>biosolids</u> or

		this subsection that the applicant provides to the receiving facility;"	sewage sludge subject to this subsection that the applicant provides to the receiving facility;"
9VAC25-31-100 P 7 f (5)	9VAC25-31-100 Q 8 f (5)	"(5) If the receiving facility places sewage sludge in bags or containers for sale or give-away to application to the land, a copy of any labels or notices that accompany the sewage sludge."	Replace term "sewage sludge" with "biosolids" and make grammatical correction. Revised language: "(5) If the receiving facility places sewage sludge <u>biosolids</u> in bags or containers for sale or give-away to <u>for</u> application to the land, a copy of any labels or notices that accompany the sewage sludge <u>biosolids</u> ."
9VAC25-31-100 P 8	9VAC25-31-100 Q 9	"8. If sewage sludge from the applicant's facility is applied to the land in bulk form and is not subject to subdivision 7 d or f of this subsection, the applicant must provide the following information:"	Renumber subdivision. Replace term "sewage sludge" with "biosolids" and revise and correct subdivision references. Revised language: " 8. <u>9.</u> If sewage sludge <u>biosolids</u> from the applicant's facility is applied to the land in bulk form and is not subject to subdivision 7 <u>8</u> d, e or f of this subsection, the applicant must provide the following information:"
9VAC25-31-100 P 8 a	9VAC25-31-100 Q 9 a		Add new subdivision language for "9 a" that reads: "a. <u>Written permission of landowners on the most current form approved by the board.</u> " New language added to clarify requirements. Based on comments received.
9VAC25-31-100 P 8 a	9VAC25-31-100 Q 9 b	"a. The total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land."	Renumbered subdivision from "8 a" to "9 b". Renumbered to account for addition of new language for subdivision. Replace term "sewage sludge" with "biosolids". Revised language: " <u>b.</u> The total dry metric tons per 365-day period of sewage sludge <u>biosolids</u> subject to this subsection that is applied to the land."
9VAC25-31-100 P 8 b	9VAC25-31-100 Q 9 c	"b. If any land application sites are located in states other than the state where the sewage sludge is prepared, a description of how the applicant will notify the permitting authority for the state(s) where the land application sites are located."	Renumbered subdivision from "8 b" to "9 c". Renumbered to account for addition of new language for subdivision and renumbering. Replace term "sewage sludge" with "biosolids". Revised language: " b. <u>c.</u> If any land application sites are located in states other than the state where the sewage sludge <u>biosolids</u> is prepared, a description of how the applicant will notify the permitting authority for the state(s) where the land application sites are located."
9VAC25-31-100 P 8 c	9VAC25-31-100 Q 9 d	"c. The following information for each land application site that has been identified at the time	Renumber to account to addition of new subdivisions. Revised language: " c. <u>d.</u> The following information for each land application site that has been identified at

		of permit application:"	the time of permit application:"
9VAC25-31-100 P 8 c (1)	9VAC25-31-100 Q 9 d (1)	Permit Application: use of DEQ control number to identify land application site. "(1) The name (if any), and location for the land application site;"	Added a condition for identifying sites that have not yet been assigned a DEQ control number, based on comment. Revised language: "(1) The name (if any), <u>DEQ control number, if previously assigned, identifying the land application field or site.</u> <u>If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location for the land application site;</u> "
9VAC25-31-100 P 8 c (2)	9VAC25-31-100 Q 9 d (2)	Permit Application: report site latitude and longitude "to the nearest second". "(2) The site's latitude and longitude to the nearest second and method of determination;"	Changed lat/long units to "in decimal degrees to three decimal places" in keeping with technology. Revised language: "(2) The site's latitude and longitude <u>to the nearest second in decimal degrees to three decimal places,</u> and method of determination;"
9VAC25-31-100 P 8 c (3)	9VAC25-31-100 Q 9 d (3)	Permit Application: topographic map of proposed sites. "(3) A topographic map (or other map if a topographic map is unavailable) that shows the site's location;"	Add requirement for "aerial photograph, including legend" in keeping with technology and to better identify sites and features, based on field experience. Revised language: "(3) A topographic map (or other map if a topographic map is unavailable) that shows the site's location; <u>A legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:"</u> "
	9VAC25-31-100 Q 9 d (3) (a)		Add required topographic map and aerial photograph feature. New language: " <u>(a) Property boundaries;</u> "
	9VAC25-31-100 Q 9 c (3) (b)		Add required topographic map and aerial photograph feature. New language: " <u>(b) Surface water courses;</u> "
	9VAC25-31-100 Q 9 d (3) (c)		Add required topographic map and aerial photograph feature. New language: " <u>(c) Water supply wells and springs;</u> "
	9VAC25-31-100 Q 9 d (3) (d)		Add required topographic map and aerial photograph feature. New language: " <u>(d) Roadways;</u> "
	9VAC25-31-100 Q 9 d (3) (e)		Add required topographic map and aerial photograph feature. New language: " <u>(e) Rock outcrops;</u> "
	9VAC25-31-100 Q 9 d (3) (f)		Add required topographic map and aerial photograph feature. New language: " <u>(f) Slopes;</u> "
	9VAC25-31-100 Q		Add required topographic map and aerial photograph feature. New language: " <u>(g)</u> "

	9 d (3) (g)		<u>Frequently flooded areas (National Resources Conservation Service (NRCS) designation);"</u>
	9VAC25-31-100 Q 9 d (3) (h)	Permit Application: topographic map of proposed sites	Add required topographic map and aerial photograph feature. New language: " <u>(h) Occupied dwellings within 400 feet of the property boundaries and all existing extended dwelling and property line setback distances;</u> " to be consistent with new buffer and setback language
	9VAC25-31-100 Q 9 d (3) (i)	Permit Application: topographic map of proposed sites	Add required topographic map and aerial photograph feature. New language: " <u>(i) Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and</u> " to be consistent with new buffer and setback language
	9VAC25-31-100 Q 9 d (3) (j)	Permit Application: topographic map of proposed sites.	Add required topographic map and aerial photograph feature. New language: " <u>(j) The gross acreage of the fields where biosolids will be applied;</u> "
	9VAC25-31-100 Q 9 d (4)		Add requirement for a "county map". New language: " <u>(4) County map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant;</u> "
	9VAC25-31-100 Q 9 d (5)	Permit Application: County tax map of proposed sites	Added "labeled with Tax ID(s)" to better identify field owners based on comment and SWCB concerns regarding permit issuance. Added "to depict properties within 400 feet of the field boundaries" to be consistent with buffer extensions to be consistent with new buffer language. New language: " <u>(5) County tax maps labeled with Tax Parcel ID(s) for each farm to be included in the permit, which may include multiple fields, to depict properties with 400 feet of the field boundaries;</u> "
	9VAC25-31-100 Q 9 d (6)	Permit Application: County tax map of proposed sites	Added "soil survey map" requirement. New language: " <u>(6) A USDA soil survey map, if available, of proposed sites for land application of biosolids;</u> "
9VAC25-31-100 P 8 c (4)	9VAC25-31-100 Q 9 d (7)	"(4) The name, mailing address and telephone number of the site owner, if different from the applicant;"	Renumber to account to addition of new subdivisions and make grammatical correction. Clarified to include information for "each site owner" based on comment and SWCB concerns regarding identification of property owners and permit

			issuance. Revised language: " (4) <u>(7)</u> The name, mailing address and telephone number of <u>the each</u> site owner, if different from the applicant;"
9VAC25-31-100 P 8 c (5)	9VAC25-31-100 Q 9 d (8)	"(5) The name, mailing address, and telephone number of the person who applies sewage sludge to the site, if different from the applicant;"	Renumber to account to addition of new subdivisions. Replace term "sewage sludge" with "biosolids". Revised language: " (5) <u>(8)</u> The name, mailing address, and telephone number of the person who applies sewage sludge <u>biosolids</u> to the site, if different from the applicant;"
9VAC25-31-100 P 8 c (6)	9VAC25-31-100 Q 9 d (9)	"(6) Whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such types are defined in 9VAC25-31-500;"	Renumber to account to addition of new subdivisions. Revised language: " (6) <u>(9)</u> Whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such types are defined in 9VAC25-31-500;"
9VAC25-31-100 P 8 c (7)	9VAC25-31-100 Q 9 d (10)	"(7) The type of vegetation grown on the site, if known, and the nitrogen requirement of this vegetation;"	Renumber to account to addition of new subdivisions. Reword requirement to clarify. Revised language: " (7) <u>(10)</u> <u>The type of vegetation grown on the site, if known, and the nitrogen requirement of this vegetation</u> <u>Description of agricultural practices including a list of proposed crops to be grown;</u> "
9VAC25-31-100 P 8 c (8)	9VAC25-31-100 Q 9 d (11)	"(8) Whether either of the vector attraction reduction options of 9VAC25-31-720 B 9 or 10 is met at the site, and a description of any procedures employed at the time of use to reduce vector attraction properties in sewage sludge; and"	Renumber to account to addition of new subdivisions. Replace term "sewage sludge" with "biosolids". Delete "and" to account for the insertion of additional requirements. Revise language: " (8) <u>(11)</u> Whether either of the vector attraction reduction options of 9VAC25-31-720 B 9 or 10 is met at the site, and a description of any procedures employed at the time of use to reduce vector attraction properties in sewage sludge <u>biosolids</u> ; and"
	9VAC25-31-100 Q 9 d (12)		Add new requirement to clarify calculations needed. New language: " <u>(12)</u> <u>Pertinent calculations justifying storage and land area requirements for biosolids application including an annual biosolids balance incorporating such factors as precipitation, evapotranspiration, soil percolation rates, wastewater loading, and monthly storage (input and drawdown); and"</u>
9VAC25-31-100 P 8 c (9)	9VAC25-31-100 Q 9 d (13)	"(9) Other information that describes how the site will be managed, as specified by the board."	Renumber to account to addition of new subdivisions. " (9) <u>(13)</u> Other information that describes how the site will be managed, as specified by the board."

<p>9VAC25-31-100 P 8 d</p>	<p>9VAC25-31-100 Q 9 e</p>	<p>"d. The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the site:"</p>	<p>Renumber to account to addition of new subdivisions. Replace term "sewage sludge" with "biosolids". Correct "table" reference. "d. e. The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 to the site:"</p>
<p>9VAC25-31-100 P 8 d (1)</p>	<p>9VAC25-31-100 Q 9 e (1)</p>	<p>"(1) Whether the applicant has contacted the permitting authority in the state where the bulk sewage sludge subject to 9VAC25-31-540 B 2 will be applied, to ascertain whether bulk sewage sludge subject to 9VAC25-31-540 B 2 has been applied to the site on or since July 20, 1993, and if so, the name of the permitting authority and the name and phone number of a contact person at the permitting authority."</p>	<p>Replace term "sewage sludge" with "biosolids". Correct table reference from "9VAC25-31-540 B 2" to "9VAC25-31-540 B Table 2". Revised language: "(1) Whether the applicant has contacted the permitting authority in the state where the bulk sewage-sludge <u>biosolids</u> subject to 9VAC25-31-540 B [<u>Table</u>] 2 will be applied, to ascertain whether bulk sewage sludge <u>biosolids</u> subject to 9VAC25-31-540 B [<u>Table</u>] 2 has been applied to the site on or since July 20, 1993, and if so, the name of the permitting authority and the name and phone number of a contact person at the permitting authority."</p>
<p>9VAC25-31-100 P 8 d (2)</p>	<p>9VAC25-31-100 Q 9 e (2)</p>	<p>"(2) Identification of facilities other than the applicant's facility that have sent, or are sending, sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the site since July 20, 1993, if, based on the inquiry in subdivision 8 d (1) of this subsection, bulk sewage sludge subject to the cumulative loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993."</p>	<p>Replace term "sewage sludge" with "biosolids". Correct table reference from "9VAC25-31-540 B 2" to "9VAC25-31-540 B Table 2". Revised language: "(2) Identification of facilities other than the applicant's facility that have sent, or are sending, sewage-sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 to the site since July 20, 1993, if, based on the inquiry in subdivision 8 d (1) of this subsection, bulk sewage-sludge <u>biosolids</u> subject to the cumulative loading rates in 9VAC25-31-540 B [<u>Table</u>] 2 has been applied to the site since July 20, 1993."</p>
<p>9VAC25-31-100 P 8 e</p>		<p>"e. If not all land application sites have been identified at the time of permit application, the applicant must submit a land application plan that, at a minimum:"</p>	<p>Delete subdivision and associated requirements. Deleted Land Application Plan language because notification requirements in statute supercede the addition of land with administrative approval.</p>

	9VAC25-31-100 Q 10		Add new requirements for biosolids storage facilities not located at the site of a wastewater treatment plant. New language: <u>"10. Biosolids storage facilities not located at the site of the wastewater treatment plant. Plans and specifications for biosolids storage facilities not located at the site of the wastewater treatment plant generating the biosolids, including routine and on-site storage, shall be submitted for issuance of a certificate to construct and a certificate to operate in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790 and shall depict the following information:"</u>
	9VAC25-31-100 Q 10 a		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"a. Site layout on a recent 7.5 minute topographic quadrangle or other appropriate scaled map;"</u>
	9VAC25-31-100 Q 10 b		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"b. Location of any required soil, geologic, and hydrologic test holes or borings;"</u>
	9VAC25-31-100 Q 10 c		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"c. Location of the following field features within 0.25 miles of the site boundary (indicate on map) with the approximate distances from the site boundary:</u> <u>(1) Water wells (operating or abandoned);</u> <u>(2) Surface waters;</u> <u>(3) Springs;</u> <u>(4) Public water supplies;</u> <u>(5) Sinkholes;</u> <u>(6) Underground and surface mines;</u> <u>(7) Mine pool (or other) surface water discharge points;</u> <u>(8) Mining spoil piles and mine dumps;</u> <u>(9) Quarries;</u> <u>(10) Sand and gravel pits;</u> <u>(11) Gas and oil wells;</u> <u>(12) Diversion ditches;</u> <u>(13) Occupied dwellings, including industrial and commercial establishments;</u> <u>(14) Landfills and dumps;</u> <u>(15) Other unlined impoundments;</u>

			<u>(16) Septic tanks and drainfields; and (17) Injection wells;</u>
	9VAC25-31-100 Q 10 d		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"d. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information: (1) Maximum and minimum percent slopes; (2) Depressions on the site that may collect water; (3) Drainage ways that may attribute to rainfall run-on to or run-off from this site; and (4) Portions of the site, if any, that are located within the 100-year floodplain;</u>
	9VAC25-31-100 Q 10 e		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"e. Data and specifications for the liner proposed for seepage control;"</u>
	9VAC25-31-100 Q 10 f		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"f. Scaled plan view and cross-sectional view of the facilities showing inside and outside slopes of all embankments and details of all appurtenances;"</u>
	9VAC25-31-100 Q 10 g		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. <u>"g. Calculations justifying impoundment capacity; and"</u>
	9VAC25-31-100 Q 10 h		Add specific information requirement for biosolids storage facilities not located at the site of the wastewater treatment plant. Revised language to read: <u>"h. Groundwater monitoring plans for the facilities, if required by the department. The groundwater monitoring plan shall include pertinent geohydrological data to justify upgradient and downgradient well location and depth."</u> Because NMP is required, biosolids cannot be applied annually at full agronomic rate or higher, which would warrant groundwater monitoring, added language to clarify information is required only if groundwater monitoring plan is required.
	9VAC25-		Add requirement related to staging. New

	31-100 Q 11		language: " <u>11. Staging. Generic plans are required for staging of biosolids.</u> "
	9VAC25-31-100 Q 12		<p>Add language to clarify the requirements for a biosolids management plan. New language: "<u>12. A biosolids management plan shall be provided that includes the following minimum site specific information at the time of permit application:</u></p> <p><u>a. A comprehensive, general description of the operation shall be provided, including biosolids source or sources, quantities, flow diagram illustrating treatment works biosolids flows and solids handling units, site description, methodology of biosolids handling for application periods, including storage and nonapplication period storage, and alternative management methods when storage is not provided.</u></p> <p><u>b. A nutrient management plan approved by the Department of Conservation and Recreation as required for application sites prior to board authorization under the following conditions:</u></p> <p><u>(1) Sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;</u></p> <p><u>(2) Sites where land application is proposed more frequently than once every three years at greater than 50% of the annual agronomic rate;</u></p> <p><u>(3) Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or</u></p> <p><u>(4) Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.</u>"</p> <p>To be consistent with requirements in section 410, based on comments received.</p>
	9VAC25-31-100 Q 13		<p>Add language to clarify requirements as they relate to "biosolids transport". New language: "<u>13. Biosolids transport.</u></p> <p><u>a. General description of transport vehicles to be used;</u></p> <p><u>b. Procedures for biosolids offloading at the biosolids facilities and the land application</u></p>

			<p><u>site together with spill prevention, cleanup (including vehicle cleaning), field reclamation, and emergency spill notification and cleanup measures; and</u> <u>c. Voucher system used for documentation and recordkeeping.</u></p>
	9VAC25-31-100 Q 14		<p>Add language to clarify the requirements for field operations including storage and application methodology. New language: <u>"14. Field operations.</u> <u>a. Storage.</u> <u>(1) Routine storage at facilities not located at the site of the wastewater treatment plant – supernatant handling and disposal, biosolids handling, and loading of transport vehicles, equipment cleaning, freeboard maintenance, and inspections of structural integrity;</u> <u>(2) On-site storage – procedures for department/board approval and implementation;</u> <u>(3) Staging – procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner/cover requirements and the time limit assigned to such use; and</u> <u>(4) Field reestablishment of offloading (staging) areas.</u> <u>b. Application methodology.</u> <u>(1) Description and specifications on spreader vehicles;</u> <u>(2) Procedures for calibrating equipment for various biosolids contents to ensure uniform distribution and appropriate loading rates on a day-to-day basis; and</u> <u>(3) Procedures used to ensure that operations address the following constraints: application of biosolids to frozen ground, pasture/hay fields, crops for direct human consumption and saturated or ice-covered or snow-covered ground; establishment of setback distances, slopes, prohibited access for beef and dairy animals, and soil pH requirements; and proper site specific biosolids loading rates on a field-by-field basis."</u></p>
9VAC25-31-100 P 9	9VAC25-31-100 Q 15	"9. An applicant for a permit authorizing the land application of sewage	<p>Renumber to account for the insertion of new subdivisions. Replace the term "sewage sludge" with "biosolids". Revise to</p>

		<p>sludge shall provide to the department, and to each locality in which the applicant proposes to land apply sewage sludge, written evidence of financial responsibility, including both current liability and pollution insurance, or such other evidence of financial responsibility as the board may establish by regulation in an amount not less than \$1 million per occurrence, which shall be available to pay claims for cleanup costs, personal injury and property damage resulting from the transport, storage and land application of sewage sludge in Virginia. The aggregate amount of financial liability to be maintained by the applicant shall be \$1 million for companies with less than \$5 million in annual gross revenues and shall be \$2 million for companies with \$5 million or more in gross revenue."</p>	<p>clarify where the financial responsibility requirements are located within the regulations (9VAC25-32-770 et seq.). Revised language: "<u>9- 15.</u> An applicant for a permit authorizing the land application of sewage sludge <u>biosolids</u> shall provide to the department, and to each locality in which the applicant proposes to land apply sewage sludge <u>biosolids</u>, written evidence of financial responsibility, including both current liability and pollution insurance, or such other evidence of financial responsibility as the board may establish by regulation in an amount not less than \$1 million per occurrence, which shall be available to pay claims for cleanup costs, personal injury and property damage resulting from the transport, storage and land application of sewage sludge in Virginia. The aggregate amount of financial liability to be maintained by the applicant shall be \$1 million for companies with less than \$5 million in annual gross revenues and shall be \$2 million for companies with \$5 million or more in gross revenue. <u>Evidence of financial responsibility shall be provided in accordance with requirements specified in Article 6 (9VAC25-32-770 et seq.) of Part IX of the Virginia Pollution Abatement (VPA) Permit Regulation.</u>"</p>
9VAC25-31-100 P 10	9VAC25-31-100 Q 16	"10. If sewage sludge from the applicant's facility is placed on a surface disposal site, the applicant must provide the following information:"	Renumber subdivision to account for renumbering on previous subdivisions. Revised language: " 40- 16. <u>16.</u> If sewage sludge from the applicant's facility is placed on a surface disposal site, the applicant must provide the following information:"
9VAC25-31-100 P 10 c (13)	9VAC25-31-100 Q 16 c (13)	"(13) The following information, as applicable to any ground water monitoring occurring at the active sewage sludge unit;"	Replaced "ground water" with "groundwater". To be consistent with common usage. Revised language: "(13) The following information, as applicable to any ground water <u>groundwater</u> monitoring occurring at the active sewage sludge unit;"
9VAC25-31-100 P 10 c (13) (a)	9VAC25-31-100 Q 16 c (13) (a)	"(a) A description of any ground water monitoring occurring at the active sewage sludge unit;"	Replaced "ground water" with "groundwater". To be consistent with common usage. Revised language: "(a) A description of any ground water <u>groundwater</u> monitoring occurring at the active sewage sludge unit;"

9VAC25-31-100 P 10 c (13) (b)	9VAC25-31-100 Q 16 c (13) (b)	"(b) Any available ground water monitoring data, with a description of the well locations and approximate depth to ground water."	Replaced "ground water" with "groundwater". To be consistent with common usage. Revised language: "(b) Any available ground water <u>groundwater</u> monitoring data, with a description of the well locations and approximate depth to ground water <u>groundwater</u> ."
9VAC25-31-100 P 10 c (13) (c)	9VAC25-31-100 Q 16 c (13) (c)	"(c) A copy of any ground water monitoring plan that has been prepared for the active sewage sludge unit;"	Replaced "ground water" with "groundwater". To be consistent with common usage. Revised language: "(c) A copy of any ground water <u>groundwater</u> monitoring plan that has been prepared for the active sewage sludge unit;"
9VAC25-31-100 P 10 c (13) (d)	9VAC25-31-100 Q 16 c (13) (d)	"(d) A copy of any certification that has been obtained from a qualified ground water scientist that the aquifer has not been contaminated; and"	Replaced "ground water" with "groundwater". To be consistent with common usage. Revised language: "(d) A copy of any certification that has been obtained from a qualified ground water <u>groundwater</u> scientist that the aquifer has not been contaminated; and"
9VAC25-31-100 P 11	9VAC25-31-100 Q 17	"11. If sewage sludge from the applicant's facility is fired in a sewage sludge incinerator, the applicant must provide the following information:"	Renumber to account for addition of new subdivisions. Revised language: " 44-17 . If sewage sludge from the applicant's facility is fired in a sewage sludge incinerator, the applicant must provide the following information:"
9VAC25-31-100 P 12	9VAC25-31-100 Q 18	"12. If sewage sludge from the applicant's facility is sent to a municipal solid waste landfill (MSWLF), the applicant must provide the following information for each MSWLF to which sewage sludge is sent:"	Renumber to account for addition of new subdivisions. Revised language: "12. 18 . If sewage sludge from the applicant's facility is sent to a municipal solid waste landfill (MSWLF), the applicant must provide the following information for each MSWLF to which sewage sludge is sent:"
9VAC25-31-100 P 13	9VAC25-31-100 Q 19	"13. All applicants must provide the name, mailing address, telephone number, and responsibilities of all contractors responsible for any operational or maintenance aspects of the facility related to sewage sludge generation, treatment, use, or disposal."	Renumber to account for addition of new subdivisions. Revise to include reference to "biosolids". Revised language: " 43-19 . All applicants must provide the name, mailing address, telephone number, and responsibilities of all contractors responsible for any operational or maintenance aspects of the facility related to <u>biosolids</u> or sewage sludge generation, treatment, use, or disposal."
9VAC25-31-100 P 14	9VAC25-31-100 Q 20	"14. At the request of the board, the applicant must provide any other	Renumber to account for addition of new subdivisions. Revise to refer to both "biosolids use" and sewage sludge

		information necessary to determine the appropriate standards for permitting under Part VI (9VAC25-31-420 et seq.) of this chapter, and must provide any other information necessary to assess the sewage sludge use and disposal practices, determine whether to issue a permit, or identify appropriate permit requirements; and pertinent plans, specifications, maps and such other relevant information as may be required, in scope and details satisfactory to the board."	disposal". Revised language: " 14- 20. At the request of the board, the applicant must provide any other information necessary to determine the appropriate standards for permitting under Part VI (9VAC25-31-420 et seq.) of this chapter, and must provide any other information necessary to assess the <u>sewage sludge biosolids</u> use and <u>sewage sludge</u> disposal practices, determine whether to issue a permit, or identify appropriate permit requirements; and pertinent plans, specifications, maps and such other relevant information as may be required, in scope and details satisfactory to the board."
9VAC25-31-100 P 15	9VAC25-31-100 Q 21	"15. All applications must be signed by a certifying official in compliance with 9VAC25-31-110."	Renumber to account for addition of new subdivisions. Revised language: " 15-21. All applications must be signed by a certifying official in compliance with 9VAC25-31-110."
9VAC25-31-100 Q	9VAC25-31-100 R	"Q. Applications for facilities with cooling water intake structures."	Renumber to account for the addition of new subsections. Revise language: " Q- R. Applications for facilities with cooling water intake structures."
9VAC25-31-100 Q Note 1	9VAC25-31-100 H 7 e (3)	"Note 1"	Note deleted. Moved to clarify requirements.
9VAC25-31-100 Q Note 2	9VAC25-31-100 H 7 e (4)	"Note 2"	Note deleted. Moved to clarify requirements.
9VAC25-31-100 Q Note 3	9VAC25-31-100 H 7 e (5)	"Note 3"	Note deleted. Moved to clarify requirements.
9VAC25-31-260 D 4		"D. If the board decides to prepare a draft permit, the draft permit shall contain the following information: 4. Effluent limitations, standards, prohibitions, standards for sewage sludge use or disposal, and conditions under 9VAC25-31-190, 9VAC25-31-200, 9VAC25-31-220, and Part VI (9VAC25-31-370 et seq.), and all variances that	Revise to reference "biosolids use" or "sewage sludge disposal". Revised language: "D. If the board decides to prepare a draft permit, the draft permit shall contain the following information: 4. Effluent limitations, standards, prohibitions, standards for <u>biosolids use or sewage sludge</u> use or disposal, and conditions under 9VAC25-31-190, 9VAC25-31-200, 9VAC25-31-220, and Part VI (9VAC25-31-370 et seq.), and all variances that are to be included."

		are to be included."	
9VAC25-31-280 A		"A. A fact sheet shall be prepared for every draft permit for a major VPDES facility or activity, for every Class I sludge management facility, for every VPDES general permit, for every VPDES draft permit that incorporates a variance or requires an explanation under subsection B 8 of this section, for every draft permit that includes a sewage sludge land application under 9VAC25-31-100 C 2, and for every draft permit which the board finds is the subject of wide-spread public interest or raises major issues..."	Replace the term "sewage sludge" with "biosolids". Revise section reference to 9VAC25-31-100 D 2. Revise to read: "A. A fact sheet shall be prepared for every draft permit for a major VPDES facility or activity, for every Class I sludge management facility, for every VPDES general permit, for every VPDES draft permit that incorporates a variance or requires an explanation under subsection B 8 of this section, for every draft permit that includes a sewage sludge <u>biosolids land application under 9VAC25-31-100 C 2 9VAC25-31-100 D 2</u> , and for every draft permit which the board finds is the subject of wide-spread public interest or raises major issues..." Revised to correct terminology and to update the section reference number.
9VAC25-31-280 B 7		"B. The fact sheet shall include, when appropriate: 7. Any calculations or other necessary explanation of the derivation of specific effluent limitations and conditions or standards for sewage sludge use or disposal, including a citation to the applicable effluent limitation guideline, performance standard, or standard for sewage sludge use or disposal and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed;"	Revise to include reference to "biosolids use" and "sewage sludge disposal". Revised to read: "7. Any calculations or other necessary explanation of the derivation of specific effluent limitations and conditions or standards for <u>biosolids use or sewage sludge use or disposal</u> , including a citation to the applicable effluent limitation guideline, performance standard, or standard for <u>biosolids use or sewage sludge use or disposal</u> and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed;"
9VAC25-31-280 B 9		"9. For every permit to be issued to a treatment works owned by a person other than a state or municipality, an explanation of the board's decision on regulation of users;"	Deleted extra space and corrected punctuation. Revised to read: "9. For every permit to be issued to a treatment works owned by a person other than a state or municipality, an explanation of the board's decision on regulation of users;" Grammatical correction. Based on discussions with the AG's Office.
9VAC25-31-280		The fact sheet shall	Requirement deleted except for the word

B 11		include, when applicable: "(11) For permits that include a sewage sludge land application plan...and"	"and". The land application plan is no longer a requirement of the regulations.
9VAC25-31-280 B 12	9VAC25-31-280 B 11	The fact sheet shall include, when applicable: (12) Justification of waiver of any application requirement...	Requirement renumbered to (11) to reflect deletion of original requirement. Revised to read: " 42. <u>11.</u> Justification of waiver of any application requirements under 9VAC25-31-100 J or P."
9VAC25-31-290 A 1		"A. Scope. 1. The board shall give public notice that the following actions have occurred:"	Replace "board" with "department" clarify responsibilities. Revised to read: "1. The board <u>department</u> shall give public notice that the following actions have occurred:"
9VAC25-31-290 A 2	9VAC25-31-290 A 3	"2...Public notice shall not be required for submission or approval of plans and specifications or conceptual engineering reports not required to be submitted as part of the application."	Renumber portion of original 9VAC25-31-290 A 2 to clarify requirements. Revised to read: " <u>3.</u> Public notice shall not be required for submission or approval of plans and specifications or conceptual engineering reports not required to be submitted as part of the application."
9VAC25-31-290 A 3	9VAC25-31-290 A 4	"3. Public notices may describe more than one permit or permit actions."	Renumber subdivision to account for insertion of new subdivision number. Revised to read: " 3. <u>4.</u> Public notices may describe more than one permit or permit actions."
9VAC25-31-290 C 1 b		"b. Any other agency which the board knows has issued or is required to issue a VPDES, sludge management permit;"	Replace "board" with "department" and "sludge" with "biosolids" to clarify responsibilities and to use current terminology. Revised to read: "b. Any other agency which the board <u>department</u> knows has issued or is required to issue a VPDES, sludge <u>biosolids</u> management permit;"
9VAC25-31-290 C 1 d		"d. Any state agency responsible for plan development under § 208(b)(2), 208(b)(4) or § 303(e) of the CWA..."	Correction of reference designation. Revised to insert § sign. Revised to read: "d. Any state agency responsible for plan development under § 208(b)(2), § 208(b)(4) or § 303(e) of the CWA..."
9VAC25-31-290 C 1 f (3)		"(3) Notifying the public of the opportunity to be put on the mailing list... (The board may update the mailing list from time to time by requesting written indication of continued interest from those listed. The board may delete from the list the name of any person who fails to respond	Replace "board" with "department" to clarify responsibilities. Revised to read: "(3) Notifying the public of the opportunity to be put on the mailing list... (The board <u>department</u> may update the mailing list from time to time by requesting written indication of continued interest from those listed. The board <u>department</u> may delete from the list the name of any person who fails to respond to such a request.);"

		to such a request.);"	
9VAC25-31-290 C 1 g (1)	9VAC25-31-290 C 1 g	"g. (1) Any unit of local government having jurisdiction over the area where the facility is proposed to be located; and"	Renumber subdivision. Delete subdivision reference. Revised to read: "g. (1) Any unit of local government having jurisdiction over the area where the facility is proposed to be located; and"
9VAC25-31-290 C 1 g (2)	9VAC25-31-290 C 1 h	"(2) Each state agency having any authority under state law with respect to the construction or operation of such facility,"	Renumber subdivision. Revised to read: " (2) h. Each state agency having any authority under state law with respect to the construction or operation of such facility,"
9VAC25-31-290 D 1 f		"f. A general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice or practices..."	Revise to refer to "biosolids use" and "sewage sludge disposal" Revised to read: "f. A general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge <u>biosolids</u> use and <u>sewage sludge</u> disposal practice or practices..." Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-31-290 F		"F. Upon receipt of an application for the issuance of a new or modified permit other than those for agricultural production or aquacultural production activities, the board shall"	Replace "board" with "department" to clarify responsibilities. Revised to read: "F. Upon receipt of an application for the issuance of a new or modified permit other than those for agricultural production or aquacultural production activities, the board <u>department</u> shall"
9VAC25-31-290 F 1		"1. Notify, in writing, the locality wherein the discharge or, as applicable, the associated land application of sewage sludge, or land disposal of treated sewage, stabilized sewage sludge or stabilized septage does or is proposed to take place of, at a minimum:"	Replace term "sewage sludge" with "biosolids". Revised to read: "1. Notify, in writing, the locality wherein the discharge or, as applicable, the associated land application of sewage sludge <u>biosolids</u> , or land disposal of treated sewage, stabilized sewage sludge or stabilized septage does or is proposed to take place of, at a minimum:"
9VAC25-31-290 F 2		"2. Establish a date for a public meeting to discuss technical issues relating to proposals for land application of sewage sludge, or land disposal of treated sewage, stabilized sewage sludge or stabilized septage..."	Requirement deleted. Requirement included in new materials in 9VAC25-31-290 G.

<p>9VAC25-31-290 F 3</p>	<p>9VAC25-31-290 F 2</p>	<p>"3. Except for land application of sewage sludge or land disposal of treated sewage, stabilized sewage sludge or stabilized septage, make a good faith effort to provide this same notice and information ..."</p>	<p>Renumber subdivision to account for deletion of subdivision. Replace term "sewage sludge" with "biosolids". Revised to read: "3. Except for land application of sewage sludge <u>biosolids</u> or land disposal of treated sewage, stabilized sewage sludge or stabilized septage, make a good faith effort to provide this same notice and information ..."</p>
<p>9VAC25-31-290 F 4</p>		<p>"4. For a site that is added to an existing permit authorizing land application of sewage sludge, notify persons residing on property bordering such site..."</p>	<p>Delete requirement. Requirement included in notification requirements in new language in 9VAC25-31-290 H.</p>
	<p>9VAC25-31-290 G</p>		<p>Public meeting requirements related to the an application for a new permit or the addition of sites for land application of biosolids to a permit added. New language: "<u>G. Whenever the department receives an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, or an application to reissue with the addition of sites increasing acreage by 50% or more of that authorized by the initial permit, the department shall establish a date for a public meeting to discuss technical issues relating to proposals for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage. The department shall give notice of the date, time, and place of the public meeting and a description of the proposal by publication in a newspaper of general circulation in the city or county where the proposal is to take place. Public notice of the scheduled meeting shall occur no fewer than seven or more than 14 days prior to the meeting. The department shall not issue the permit until the public meeting has been held and comment has been received from the local governing body or until 30 days have lapsed from the date of the public meeting.</u>"</p>
	<p>9VAC25-31-290 H</p>		<p>Notification requirements clarified. New language added: "<u>H. Following submission of an application for a new permit for land</u></p>

			<p><u>application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, the department shall make a good faith effort to notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields. This notification shall be in a manner selected by the department. For purposes of this subsection, "site" means all contiguous land under common ownership, but may contain more than one tax parcel.</u>" Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.</p>
	9VAC25-31-290 I		<p>Notification requirements for addition of a site that is not contiguous to sites included in an existing permit clarified. New language: "<u>I. Following the submission of an application to add a site that is not contiguous to sites included in an existing permit authorizing the land application of biosolids:</u></p> <p><u>1. The department shall notify persons residing on property bordering such site and shall receive written comments from those persons for a period of 30 days. Based upon written comments, the department shall determine whether additional site-specific requirements should be included in the authorization for land application at the site.</u></p> <p><u>2. An application for any permit amendment to increase the acreage authorized by the initial permit by 50% of more shall be considered a major modification and shall be treated as a new application for purposes of public notice and public hearings. The increase in acreage for the purpose of determining the need for the public meeting is the sum of all acreage that has been added to the permit since the last public meeting, plus that proposed to be added."</u></p>
9VAC25-31-290 J 2	9VAC25-31-290 J 3	Public notice of permit actions and public comment period; Part of original 9VAC25-31-290 J 2: Written comments shall be accepted by the board	<p>Numbered and revised to clarify requirements. Revised to read: "<u>Written-3. Accept written comments shall be accepted by the board for at least 15 days after any public hearing on the permit, unless the board votes to shorten the period.</u>For</p>

		for at least 15 days after any public hearing on the permit, unless the board votes to shorten the period. For purposes of this section, the term "locality particularly affected" means any locality which bears any identified disproportionate materials water quality impact which would not be experienced by other localities."	purposes of this section, the term "locality particularly affected" means any locality which bears any identified disproportionate materials water quality impact which would not be experienced by other localities."
9VAC25-31-290 J 2	9VAC25-31-290 J 4	Portion of original 9VAC25-31-290 J 2: "For purposes of this section, the term "locality particularly affected" means any locality which bears any identified disproportionate materials water quality impact which would not be experienced by other localities."	New subdivision language: " <u>4. For purposes of this section, the term "locality particularly affected" means any locality which bears any identified disproportionate materials water quality impact which would not be experienced by other localities."</u>
9VAC25-31-390 A 16		"When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.	Requirement deleted. The land application plan requirement is no longer included in the regulations.
9VAC25-31-420 A		"A. This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land or placed on a surface disposal site. Also included in this part are pathogen and alternative	Revise to correct terminology. Revised to include the concept of the "use of biosolids" and the "disposal of sewage sludge". Revised to read: "A. This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use <u>of biosolids</u> or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge <u>biosolids</u> applied to the land or <u>sewage sludge</u> placed on a surface disposal site. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge <u>biosolids</u> applied to the land or <u>sewage sludge</u>

		vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site."	placed on a surface disposal site."
9VAC25-31-420 A	9VAC25-31-420 B	"In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land or placed on a surface disposal site. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more."	Portion of original 9VAC25-31-420 A renumbered 9VAC25-31-420 B to better organize the requirements. Revised to correct terminology. Revised to include the concept of "biosolids applied to the land" and "sewage sludge placed on a surface disposal site". Revised to read: " <u>B.</u> In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge <u>biosolids</u> is applied to the land or <u>sewage sludge is</u> placed on a surface disposal site. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more."
9VAC25-31-420 B	9VAC25-31-420 C	"B. Applicability."	Renumbered to account for inclusion of new subsection number. Revised to read: " B. <u>C.</u> Applicability."
9VAC25-31-420 B 1	9VAC25-31-420 C 1	"1. This part applies to any person who prepares sewage sludge or applies sewage sludge to the land and to the owner/operator of a surface disposal site."	Renumbered to account for inclusion of new subsection number. Revised to include the concept of "any person who prepares sewage sludge or biosolids" and "biosolids applied to the land". Revised to read: "1. This part applies to any person who prepares sewage sludge <u>or biosolids</u> , or applies sewage sludge <u>biosolids</u> to the land and to the owner/operator of a surface disposal site."
9VAC25-31-420 B 1	9VAC25-31-420 C 1	"2. This part applies to sewage sludge applied to the land or placed on a surface disposal site."	Renumbered to account for inclusion of new subsection number. Revised to include the concept of "biosolids applied to the land" and "sewage sludge placed on a surface disposal site". Revised to read: "2. This part applies to sewage sludge <u>biosolids</u> applied to the land or <u>sewage sludge</u> placed on a surface disposal site."
9VAC25-31-420 B 1	9VAC25-31-420 C 1	"3. This part applies to land where sewage sludge is applied and to a surface disposal site."	Renumbered to account for inclusion of new subsection number. Replace the term "sewage sludge" with "biosolids". Revised to read: "3. This part applies to land where sewage sludge <u>biosolids</u> is applied and to a

			surface disposal site."
9VAC25-31-440 B		"B. No person shall use or dispose of sewage sludge through any practice for which requirements are established in this part except in accordance with such requirements."	Revise to include the concept of the "use of biosolids". Revised to read: "B. No person shall use <u>biosolids</u> or dispose of sewage sludge through any practice for which requirements are established in this part except in accordance with such requirements."
	9VAC25-31-440 C	Permits and direct enforceability	Added language to clarify requirement. New language: " <u>C. No person shall land apply Class B biosolids on any land in Virginia unless that land has been identified in an application to issue, reissue or modify a permit and approved by the board.</u> " Based on comments received.
	9VAC25-31-440 D	Permits and direct enforceability	Added language to clarify requirement. New language: " <u>D. No person shall land apply, market or distribute biosolids in Virginia unless the biosolids source has been approved by the board.</u> " Based on comments received.
9VAC25-31-460 A		Additional or more stringent requirements - "A. On a case-by-case basis, the board may impose requirements for the use or disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effect of a pollutant in the sewage sludge."	Revised to include the concept of the "use of biosolids" and the "disposal of sewage sludge". Revised to read: "A. On a case-by-case basis, the board may impose requirements for the use <u>of biosolids</u> or disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effect of a pollutant in the <u>biosolids or sewage sludge.</u> "
9VAC25-31-460 B		Additional or more stringent requirements; "B. Nothing in this part precludes another state agency with responsibility for regulating sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use or	Statute gives local government specific authority; it cannot be more stringent than this regulation – revised language to clarify: Nothing in this part precludes the authority of another state agency political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge. Revised to read: "B. Nothing in this part precludes <u>the authority</u> another state agency <u>with</u>

		disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use or disposal of sewage sludge.	responsibility for regulating sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for <u>with respect to</u> the use of <u>biosolids</u> or disposal of sewage sludge.
9VAC25-31-460 C		Additional or more stringent requirements: "C. For sewage sludge land application where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation..."	Replaced the term "buffering" with "setback distances". To be consistent with "setback" and "setback distance" language in the regulation. Revised to read: "C. For sewage sludge <u>biosolids</u> land application where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding <u>buffering setback distances</u> , transportation..."
9VAC25-31-475		Local enforcement of sewage sludge regulations.	Revised title to read: "Local enforcement of sewage sludge <u>biosolids</u> regulations." Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
9VAC25-31-475 A		"A. In the event of a dispute between a locality that has adopted a local ordinance for testing and monitoring the land application of sewage sludge and a permittee concerning the existence of a violation, the activity alleged to be in violation shall be halted pending a determination by the director. The decision of the director shall be final and binding unless reversed on judicial appeal pursuant to § 2.2-4026 of the Code of Virginia. If the activity is not halted, the director may seek an injunction compelling the halting of the activity from a court having jurisdiction."	Revise to clarify requirements. Revised to read: "A. In the event of a dispute <u>concerning the existence of a violation between a permittee and a locality</u> that has adopted a local ordinance for testing and monitoring <u>of</u> the land application of sewage sludge and a permittee <u>biosolids</u> , the activity alleged to be in violation shall be halted pending a determination by the director. The decision of the director shall be final and binding unless reversed on judicial appeal pursuant to § 2.2-4026 of the Code of Virginia. If the activity is not halted, the director may seek an injunction compelling the halting of the activity from a court having jurisdiction.
9VAC25-31-475 C		"C. Local governments shall promptly notify the department of all results	Replace "sewage sludge" with "biosolids" to use consistent current terminology. Revised to read: "C. Local governments

		from the testing and monitoring of the land application of sewage sludge performed by persons employed by local governments and any violation of..."	shall promptly notify the department of all results from the testing and monitoring of the land application of sewage sludge biosolids performed by persons employed by local governments and any violation of..."
9VAC25-31-475 D		"D. Localities receiving complaints concerning the land application of sewage sludge shall notify the department and the permit holder."	Revised to specify a time requirement for reporting of complaints; to replace "sewage sludge" with "biosolids" and to clarify requirements. Revised to read: "D. Localities <u>Local governments</u> receiving complaints concerning the land application of sewage sludge biosolids shall notify the department and the permit holder <u>within 24 hours of receiving the complaint.</u> "
9VAC25-31-480		"Requirement for a person who prepares sewage sludge."	Revise title to clarify the subject matter of the section. Revised to include the "preparation of biosolids". Revised to read: " Requirement <u>Requirements</u> for a person who prepares <u>biosolids or sewage sludge.</u> "
	9VAC25-31-480 A		Add new requirement. New language: " <u>A. Any person who prepares biosolids shall ensure that the applicable requirements in this part are met when biosolids is applied to the land.</u> "
9VAC25-31-480	9VAC25-31-480 B	"Any person who prepares sewage sludge shall ensure that the applicable requirements in this part are met when sewage sludge is applied to the land, or placed on a surface disposal site."	Numbered to account for the inclusion of a new subsection. Revised to delete the concept of "sewage sludge applied to the land". Revised to read: " <u>B. Any person who prepares sewage sludge shall ensure that the applicable requirements in this part are met when sewage sludge is applied to the land, or placed on a surface disposal site.</u> "
9VAC25-31-485		"Requirements for permittees who land apply sewage sludge."	Renamed to read: " Requirements for permittees <u>a person who land apply applies sewage sludge biosolids.</u> " Revised to conform with language used in other sections, and apply to anyone who applies biosolids
9VAC25-31-485 A		"A. Any person who land applies sewage sludge authorized by a VPDES permit shall be certified in accordance with requirements specified in the Virginia Pollution Abatement Regulation (9VAC25-320)."	Revised to read: " A. Any person who land applies sewage sludge authorized by a VPDES permit shall be certified in accordance with requirements <u>No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless an individual holding a valid certificate of competence as specified in the Virginia Pollution Abatement Regulation (9VAC25-320), Article 5.</u> "

			Certification of Land Applicators, as set forth in 9VAC25-32-690 through 9VAC25-32-760 is onsite at all times during such land application." Revise language to be in accordance with statute.
9VAC25-31-485 B		"B. Persons authorized to land apply sewage sludge under a VPDES permit shall report all complaints received by them to the department and the local governing body of the jurisdiction in which the complaint originates."	Requirement deleted and replaced with revised requirements. Revised to read: "B. Persons authorized to land apply sewage sludge under a VPDES permit shall report all complaints received by them to the department and the local governing body of the jurisdiction in which the complaint originates. <u>When an application for a permit that authorizes the land application of biosolids is submitted to the department:</u> "
	9VAC25-31-485 B 1		New requirement added. New language: " <u>1. Permit holders shall use a DEQ control number, if previously assigned, identifying each land application field. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location.</u> " Added to provide for requirement to use a "DEQ control number" and to provide for those instances where a DEQ control number has not been assigned. Based on comments received.
	9VAC25-31-485 B.2.		Requirements for a "written agreement" added. New language: " <u>2. A written agreement shall be established between the landowner and permit applicant or permit holder to be submitted with the permit application, whereby the landowner shall consent to the application of biosolids on his property. The landowner agreement shall include:</u> " Added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (a)		Added new requirement: " <u>(a) A statement certifying that the landowner is the sole owner or one of multiple owners of the property or properties identified on the landowner agreement;</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (b)		Added new requirement: " <u>(b) A statement certifying that no concurrent agreements are in effect for the fields to be permitted for biosolids application;</u> " New language

			added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (c)		Added new requirement: " <u>(c) An acknowledgement that the landowner shall notify the permittee when land is sold or ownership transferred;</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (d)		Added new requirement: " <u>(d) An acknowledgement that the landowner shall notify the permittee if any conditions change such that any component of the landowner agreement becomes invalid;</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (e)		Added new requirement: " <u>(e) Permission to allow department staff on the landowner's property to conduct inspections;</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (f)		Added new requirement: " <u>(f) An acknowledgement by the landowner of any site restrictions identified in the regulation;</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (g)		Added new requirement: " <u>(g) An acknowledgement that the landowner has received a biosolids fact sheet approved by the department; and</u> " New language added to clarify requirements. Based on comments received and SWCB request.
	9VAC25-31-485 B 2 (g)		Added new requirement based on SWCB actions: " <u>(h) An acknowledgement that the landowner shall not remove notification signs placed by the permit holder.</u> "
	9VAC25-31-485 B 3		Added requirement for "new landowner agreements". New language: " <u>3. New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids.</u> " Language added to clarify requirements. Based on

			comments received and SWCB request.
	9VAC25-31-485 B 4		Added new requirement: " <u>4. For permits modified in order to incorporate changes to this regulation, the permit holder shall, within 60 days of the effective date of the permit modification, advise the landowner by certified letter of the requirement to provide a new landowner agreement. The letter shall include instructions to the landowner for signing and returning the new landowner agreement, and shall advise the landowner that the permit holder's receipt of such new landowner agreement is required prior to application of biosolids to the landowner's property.</u> " Language added to clarify requirements. Based on comments received and SWCB request. Use of "certified" maintains consistent language with the type of mail service required in the final regulation in the financial responsibility sections. Certified mail is consistent with the type of service required to mail out permits, consistent with the regulatory requirements for CAFOs to file certain notices; and there is no place in any other DEQ statute or other regulations that require anything beyond certified mail.
	9VAC25-31-485 B 5		New requirement added to address "responsibility". New language: " <u>5.The responsibility for obtaining and maintaining the agreements lies with the permit holder.</u> "
	9VAC25-31-485 C		New requirement added. New language: " <u>C. The permit holder shall ensure that the landowner agreement is still valid at the time of land application.</u> "
	9VAC25-31-485 D		New subsection added. New language: " <u>D. Notification requirements.</u> "
9VAV25-31-485 C	9VAC25-31-485 D 1	Requirements for permittees who land apply sewage sludge/biosolids. Notification requirements: "C. At least 100 days prior to commencing land application of sewage sludge at a permitted site the permittee shall deliver or cause to be delivered written notification to the chief executive officer or	Renumbered to account for subsection renumbering. Revised to provide notice at least 100 days prior to commencing the first land application at the site, in order to clarify that it is a one-time notification. Revised to replace "sewage sludge" with "biosolids" Revised to read: " <u>C. 1. At least 100 days prior to commencing the first land application of sewage sludge biosolids at a permitted site the permittee shall deliver or cause to be delivered written notification to the chief executive officer or his designee</u> "

		his designee for the local government where the site is located. The notice shall identify the location of the permitted site and the expected sources of the sewage sludge to be applied to the site. This requirement may be satisfied by providing a list of all available permitted sites in the locality at least 100 days prior to commencing the application at any site on the list. If the site is located in more than one county, the notice shall be provided to all jurisdictions where the site is located."	for the local government where the site is located. The notice shall identify the location of the permitted site and the expected sources of the sewage sludge <u>biosolids</u> to be applied to the site. This requirement may be satisfied by <u>the department's notice to the local government at the time of receiving the permit application if all necessary information is included in the notice or by providing a list of all available permitted sites in the locality at least 100 days prior to commencing the application at any site on the list. If the site is located in more than one county, the notice shall be provided to all jurisdictions where the site is located.</u> " Revised language was based on TAC discussion and comments received and may provide longer notice since the permit processing time may be up to 180 days.
	9VAC25-31-485 D 2		Added requirement regarding 14 day notice based on statutory language. Based on comments received and TAC discussions. New language: " <u>2. At least days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver cause to be delivered written notification to the government where the site is located, unless they request in writing not to receive the notice. The nice shall identify the location of the permitted site and the expected sources of the sewage sludge to be applied to the site.</u> "
9VAC25-31-485 D	9VAC25-31-485 D 3	"D. The permittee shall deliver or cause to be delivered written notification to the department as least 14 days prior to commencing land application of sewage sludge at a permitted site. The notice shall identify the location of the permitted site and the expected sources of the sewage sludge to be applied to the site."	Renumbered and revised to clarify: " D- 3. The <u>Not more than 24 hours prior to commencing of land application activities, including delivery of biosolids at a permitted site, the permittee shall deliver or cause to be delivered written notification to notify in writing the department as least 14 days prior to commencing land application of sewage sludge at a permitted site. The notice shall identify the location of the permitted site and the expected sources of the sewage sludge to be applied to the site and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. This notification shall</u>

			include identification of the biosolids source and shall include only sites where land application activities will commence within 24 hours or where the biosolids will be staged within 24 hours. Changes were based on comments received and TAC discussions.
9VAC25-31-485 E		"E. The permittee shall provide to the department, and to each locality in which it is permitted to land apply sewage sludge, written evidence of financial responsibility...with \$5 million or more in annual gross revenue."	Requirement deleted and replaced with a reference to a new regulation Article and sections of the Virginia Pollution Abatement (VPA) Permit Regulation. New language reads: "E. The permittee shall provide to the department, and to each locality in which it is permitted to land apply sewage sludge, written evidence of financial responsibility...with \$5 million or more in annual gross revenue. <u>Evidence of financial responsibility shall be provided in accordance with the requirements specified in Article 6 (9VAC25-32-770 et seq.) of Part IX of the Virginia Pollution Abatement (VPA) Permit Regulation.</u> "
	9VAC25-31-485 F		Add new subsection. New language: " <u>F. Posting signs.</u> "
	9VAC25-31-485 F 1		Posting of signs: " <u>1. At least five business days prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post signs at the site that comply with this section, are visible and legible from the public right-of-way in both directions of travel and conform to the specifications in this subsection. The sign shall remain in place for at least five business days after land application has been completed at the site. The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site.</u> " Based on SWCB actions.
	9VAC25-31-485 F 1 a		Added signage requirement: " <u>a. A sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site used by the biosolids transport vehicles.</u> " To clarify requirements.
	9VAC25-31-485 F 1 b		Added new signage requirement. Based on comments received to clarify requirements. New language: " <u>b. If the field is located adjacent to a public right-of-way, at least one sign shall be posted along each public</u>

			<u>road frontage beside the field to be land applied."</u>
	9VAC25-31-485 F 1 c		Added waiver language to clarify requirements. Based on comments received. New language: " <u>c. The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or where requirements conflict with local government ordinances and other requirements regulating the use of signs."</u>
	9VAC25-31-485 F 2	Notification of land application activity; 5 day signage	Added requirement to notify department when signs are posted. " <u>2. Upon the posting of signs at a land application site prior to commencing land application, the permittee shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. Notification shall be delivered to the department within 24 hours of the posting of the signs. The notice shall include the following:</u> " Based on TAC discussions and to clarify requirements.
	9VAC25-31-485 F 2 a. – d.	Notification of land application activity; 5 day signage	Added requirement for the notice to contain: <u>"a. The name and telephone number of the permit holder, including the name of a representative knowledgeable of the permit;</u> <u>b. Identification by tax map number and the DEQ control number for sites on which land application is to take place;</u> <u>c. The name or title, and telephone number of at least one individual designated by the permit holder to respond to questions and complaints related to the land application project, if not the permit holder identified in 9VAC25-31-485 F 2 a; and</u> <u>d. The approximate dates on which land application is to begin and end at the site."</u> Language moved from 14 day notification and revised based on comments
	9VAC25-31-485 F 3	Notification of land application activity; 5 day signage	Added specific signage requirements. New language: " <u>3. The sign shall be made of weather-resistant materials and shall be</u>

			<u>sturdily mounted so as to be capable of remaining in place and legible throughout the period that the sign is required at the site. Signs required by this section shall be temporary, nonilluminated, and four square feet or more in area, and only contain the following information:"</u>
	9VAC25-31-485 F 3 a		Add specific signage requirements. New language: " <u>a. A statement that biosolids are being land applied at the site;"</u> "
	9VAC25-31-485 F 3 b		Add specific signage requirements. New language: " <u>b. The name of the permit holder;"</u> "
	9VAC25-31-485 F 3 c		Add specific signage requirements. New language: " <u>The telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and</u> "
	9VAV25-31-485 F 3 d		Add specific signage requirements. New language: " <u>d. Contact information for the department, including a telephone number for complaints and inquiries."</u>
	9VAV25-31-485 F 4		Add specific signage requirements. New language: " <u>4. The permit holder shall make a good faith effort to replace or repair any sign that has been removed from a land application site or that has been damaged so as to render any of its required information illegible prior to five business days after completion of land application."</u>
	9VAC25-31-485 G		Added subsection to address requirements for a "biosolids management plan". New language: " <u>G. Biosolids management plan."</u> "
	9VAC25-31-485 G 1		Clarified that biosolids management plant shall be maintained and implemented. New language to read: " <u>1. The permit holder shall maintain and implement a Biosolids management plan which shall consist of three components:"</u> "
	9VAC25-31-485 G 1 a		Added to clarify components of a biosolids management plan. New language: " <u>a. The materials, including site booklets, developed and submitted at the time of permit application or permit modification adding a site to the permit in accordance with 9VAC25-31-100 Q."</u> "
	9VAC25-31-485 G 1 b		Added to clarify components of a biosolids management plan. New language: " <u>b. Nutrient management plan for each site, in accordance with 9VAC25-31-505; and</u> "

	9VAC25-31-485 G 1 c		Added to clarify components of a biosolids management plan. New language: " <u>c. Operation and maintenance (O&M) manual, developed and submitted to the department within 90 days of the effective date of the permit.</u> "
	9VAC25-31-485 G 2		Added new requirement: " <u>2. The biosolids management plan and all of its components shall be incorporated as an enforceable part of the permit.</u> " Added to clarify requirements.
	9VAC25-31-485 G 3		Added new subdivision to address the requirements for an O&M manual. New language: " <u>3. The O&M manual shall include at a minimum:</u> "
	9VAC25-31-485 G 3 a		Added to specify contents of the O&M manual. New language: " <u>a. Equipment maintenance and calibration procedures and schedules;</u> "
	9VAC25-31-485 G 3 b		Added to specify contents of the O&M manual. New language: " <u>b. Storage facility maintenance procedures and schedules;</u> "
	9VAC25-31-485 G 3 c		Added to specify contents of the O&M manual. New language: " <u>c. Sampling schedules for;</u> "
	9VAC25-31-485 G 3 c (1)		Added to specify contents of the O&M manual. New language: " <u>(1) Required monitoring; and</u> "
	9VAC25-31-485 G 3 c (2)		Added to specify contents of the O&M manual. New language: " <u>(2) Operational control testing;</u> "
	9VAC25-31-485 G 3 d		Added to specify contents of the O&M manual. New language: " <u>d. Sample collection, preservation and analysis procedures, including laboratories and methods used; and</u> "
	9VAC25-31-485 G 3 e		Added to specify contents of the O&M manual. New language: " <u>e. Instructions for recording and reporting all monitoring activities.</u> "
	9VAC25-31-485 G 4		Added to clarify requirements. New language: " <u>4. Current VPDES permit holders who land apply biosolids may use their existing VPDES O&M plan addressing land application to satisfy the requirements of this section if the existing plan addresses all of the required minimum components identified in this section.</u> "
	9VAC25-31-485 H		Added new subsection to address the handling of complaints. New language: " <u>H.</u> "

			Handling of complaints."
	9VAC25-31-485 H 1		Added new subdivision to provide specific requirements for handling of complaints. New language: " <u>1. Within 24 hours of receiving notification of a complaint, the permit holder shall commence investigation of the complaint and shall determine whether the complaint is substantive. The permit holder shall confirm receipt of all substantive complaints by phone, email, or facsimile to the department, the chief executive officer or designee for the local government of the jurisdiction in which the complaint originates, and the owner of the treatment facility from which the biosolids originated within 24 hours after receiving the complaint.</u> "
	9VAC25-31-485 H 2		Added new subdivision to provide specific requirements for handling of complaints and to define "substantive complaint". New language: " <u>2. For the purposes of this section, a substantive complaint shall be deemed to be any complaint alleging a violation of these regulations, state law, or local ordinance; a release of biosolids to state waters or to a public right-of-way or to any location not authorized in the permit; or failure to comply with the nutrient management plan for the land application site.</u> "
9VAC25-31-490 A		"A. Representative samples of sewage sludge that is applied to the land, or placed on a surface disposal site shall be collected and analyzed."	Replace the term "sewage sludge" with "biosolids". Revised language: "A. Representative samples of sewage sludge <u>biosolids</u> that is applied to the land, or placed on a surface disposal site shall be collected and analyzed."
9VAC25-31-490 B		"B. Methods in the materials listed below shall be used to analyze samples of sewage sludge and calculation procedures in the materials shall be used to calculate the percent volatile solids reduction for sewage sludge."	Replace "sewage sludge" with "biosolids". Add CFR reference. Revised based on comment and to incorporate currently approved methods. Revised to read: "B. Methods in the materials listed below <u>or in 40 CFR Part 136</u> shall be used to analyze samples of sewage sludge <u>biosolids</u> and calculation procedures in the materials shall be used to calculate the percent volatile solids reduction for sewage sludge <u>biosolids</u> ."
9VAC25-31-500		Definitions."Agronomic rate"	Replaced "sewage sludge" with "biosolids". To conform to common usage.
9VAC25-31-500		Definitions:"Annual	Formatting correction. Revised to read:

		pollutant loading rate (ALPR)" means...	"Annual pollutant loading rate (ALPR)" or "APLR" means...
9VAC25-31-500		Definitions: "Annual whole sludge application rate (AWSAR)" means the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365-day period.	Formatting correction. Replace "sewage sludge" with "biosolids". Revised to read: "Annual whole sludge application rate (AWSAR)" or " <u>AWSAR</u> " means the maximum amount of sewage sludge <u>biosolids</u> (dry weight basis) that can be applied to a unit area of land during a 365-day period.
9VAC25-31-500		Definitions: "Apply sewage sludge or sewage sludge applied to the land" means land application of sewage sludge.	Replace "sewage sludge" with "biosolids". Revised to read: "Apply sewage sludge <u>biosolids</u> " or sewage sludge " <u>biosolids</u> applied to the land" means land application of sewage sludge <u>biosolids</u> .
9VAC25-31-500		Definitions: "Bulk sewage sludge" means sewage sludge that is not sold or given away in a bag or other container for application to the land.	Replace "bulk sewage sludge" with "bulk biosolids" and "sewage sludge" with "biosolids". Grammatical correction. Revised to read: " Bulk sewage sludge " " <u>Bulk biosolids</u> " means sewage sludge <u>biosolids</u> that is <u>are</u> not sold or given away in a bag or other container for application to the land.
9VAC25-31-500		Definitions: "Class I sludge management facility" means...because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.	Revise to include the concept of "biosolids use" or "sewage sludge disposal". Revised to read: Definitions: "Class I sludge management facility" means...because of the potential for its <u>biosolids use or sewage sludge</u> use or disposal practice to affect public health and the environment adversely.
9VAC25-31-500		Definitions: "Cover crop" means a small grain crop, such as oats, wheat, or barley, not grown for harvest.	Deleted definition "cover crop" because it is nutrient management related and defined in DCR regulation, based on TAC discussion.
9VAC25-31-500		Definitions: "Density of microorganisms" means the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.	Revise to include "biosolids". Revised to read: "Density of microorganisms" means the number of microorganisms per unit mass of total solids (dry weight) in the <u>biosolids or sewage sludge</u> .
9VAC25-31-500		Definitions:	Add definition of "dry tons". New language: " <u>Dry tons</u> " means dry weight established as <u>representative of land applied biosolids ad expressed in units of English tons.</u>
9VAC25-31-500		Definitions:	Add definition of "dry weight". New language: " <u>Dry weight</u> " means the

			<u>measured weight of a sample of sewage sludge or biosolids after all moisture has been removed in accordance with the standard methods of testing and often represented as percent solids.</u>
9VAC25-31-500		Definitions:	Add definition of "exceptional quality biosolids". New language: <u>"Exceptional quality biosolids" means biosolids that have received an established level of treatment for pathogen control and vector attraction reduction and contain known levels of pollutants, such that they may be marketed or distributed for public use in accordance with this regulation.</u>
9VAC25-31-500		Definitions:	Add definition of "field". New language: <u>"Field" means an area of land within a site where land application is proposed or permitted.</u>
9VAC25-31-500		Definitions: "Food crops" means crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.	Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office. Revised to read: "Food crops" means <u>crops consumed-produced primarily for consumption</u> by humans. These include, but are not limited to, fruits, vegetables, and tobacco.
9VAC25-31-500		Definitions: "Land application" means the spraying or spreading of sewage sludge biosolids onto the land surface; the injection of sewage sludge biosolids below the land surface; or the incorporation of sewage sludge biosolids into the soil so that the sewage sludge biosolids can either condition the soil or fertilize crops or vegetation grown in the soil.	Deleted definition. Replaced with a biosolids specific definition of "land application."
9VAC25-31-500		Definitions:	Added new biosolids specific definition of "Land application". Added to clarify terms and to clarify requirements. New language: <u>"Land application" means, in regard to biosolids, the distribution of biosolids by spreading or spraying on the surface of the land, injecting below the surface of the land, or incorporating into the soil with a uniform application rate for the purpose of</u>

			<u>fertilizing the crops and vegetation or conditioning the soil. Sites approved for land application of biosolids in accordance with this regulation are not to be considered to be treatment works. Bulk disposal of stabilized sludge in a confined area, such as in landfills, is not land application. For the purpose of this regulation, the use of biosolids in agricultural research and the distribution and marketing of exceptional quality biosolids are not land application.</u>
9VAC25-31-500		Definitions:	Added new definition: " <u>Land application area</u> " means, in regard to biosolids, the <u>area in the permitted field, excluding the buffer zones, where biosolids may be applied.</u> Based on comment.
9VAC25-31-500		Definitions:	Added new definition " <u>Land applier</u> " means <u>someone who land applies biosolids pursuant to a valid permit from the department as set forth in this regulation and 9VAC25-32-690 through 760.</u> Based on comment
9VAC25-31-500		Definitions: "Liner" means soil or synthetic material that has a hydraulic conductivity of 1×10^{-6} centimeters per second or less.	Revised to correct hydraulic conductivity number. Revised to read: "Liner" means soil or synthetic material that has a hydraulic conductivity of 1×10^{-6} - 1×10^{-7} centimeters per second or less.
9VAC25-31-500		Definitions:	Add definition of "local monitor". New language: " <u>Local monitor</u> " means <u>a person or persons employed by a local government to perform the duties of monitoring the operations of land appliers pursuant to a local ordinance.</u>
9VAC25-31-500		Definitions:	Add definition of "local ordinance". New language: " <u>Local ordinance</u> " means <u>an ordinance adopted by counties, cities, or towns in accordance with § 62.1-44.19:3 of the Code of Virginia.</u>
9VAC25-31-500		Definitions: "Municipality" means a city, town, county, district, association, or other public body...or an integrated waste management facility as defined in § 201(e) of the	Revise to include "biosolids". Revised to read: "Municipality" means a city, town, county, district, association, or other public body...or an integrated waste management facility as defined in § 201(e) of the CWA, as amended, that has as one of its principal responsibilities the treatment,

		CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge.	transport, use, or disposal of <u>biosolids or sewage sludge</u> .
9VAC25-31-500		Definitions:	Add definition of "odor sensitive receptor". Added to clarify requirements. Based on discussions with the AG's Office. New language: "Odor sensitive receptor" means in the context of land application of biosolids, any health care facility, such as hospitals, convalescent house, etc. or a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities.
9VAC25-31-500		Definitions: "Person who prepares sewage sludge" means either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge."	Revised to be consistent with use in the regulations and based on comments received. Revised definition to read: "Person who prepares sewage sludge <u>biosolids</u> " means either the person who generates sewage sludge <u>biosolids</u> during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge." Revised to be consistent with use in the regulations and based on comments received.
9VAC25-31-500		Definitions: "Pollutant limit" means a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant...	Replace "sewage sludge" with "biosolids". Revised to read: "Pollutant limit" means a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge <u>biosolids</u> (e.g., milligrams per kilogram of total solids); the amount of a pollutant...
9VAC25-31-500		Definitions: "Public contact site" means land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.	Revise to delete references to "plant nurseries" and "turf farms". Revised to read: "Public contact site" means land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
9VAC25-31-500		Definitions: "Reclamation site" means drastically disturbed land that is reclaimed using sewage	Replace "sewage sludge" with "biosolids". Revised to read: "Reclamation site" means drastically disturbed land that is reclaimed using sewage sludge <u>biosolids</u> . This

		sludge. This includes, but is not limited to, strip mines and construction sites.	includes, but is not limited to, strip mines and construction sites.
9VAC25-31-500		Definitions:	Add definition of "site". New language: <u>"Site" means the area of land within a defined boundary where an activity is proposed or permitted.</u>
9VAC25-31-500		Definitions:	Added new definition to clarify requirements. New language: <u>"Use" means to manage or recycle a processed waste product in a manner so as to derive a measurable benefit as a result of such management.</u>
9VAC25-31-500		Definitions:"Vector attraction" means the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.	Revise to include "biosolids". Revised to read: "Vector attraction" means the characteristic of <u>biosolids</u> or sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.
9VAC25-31-505		Article 2 Sewage Sludge Applied to the Land	Revised title of article for consistency in terminology. Revised to read: Article 2 Sewage Sludge <u>Biosolids</u> Applied to the Land
9VAC25-31-505 A		"A. A nutrient management plan prepared by a person who is certified as a nutrient management planner by the Department of Conservation and Recreation shall be developed for all application sites prior to sewage sludge land application."	Correct terminology: Replace "sewage sludge" with "biosolids" as it refers to land application. Revise to read: "A. A nutrient management plan prepared by a person who is certified as a nutrient management planner by the Department of Conservation and Recreation shall be developed for all application sites prior to sewage sludge <u>biosolids</u> land application."
9VAC25-31-505 A	9VAC25-31-505 A 1	Universal requirements for land application operations. Approved NMP required for specific conditions. "A nutrient management plan approved by the Department of Conservation and Recreation shall be required for application sites prior to board authorization under specific conditions, including but not limited to..."	Renumbered to clarify - Put the existing language into a list. Revised to read: " <u>1.</u> A nutrient management plan approved by the Department of Conservation and Recreation shall be required for application sites prior to board authorization under specific conditions, including but not limited to:"

<p>9VAC25-31-505 A</p>	<p>9VAC25-31-505 A 1 a</p>	<p>Universal requirements for land application operations. Approved NMP required for "sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;"</p>	<p>Renumbered to clarify - Put the existing language into a list. Revised to read: "<u>a.</u> sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;"</p>
<p>9VAC25-31-505 A</p>	<p>9VAC25-31-505 A 1 b</p>	<p>Universal requirements for land application operations; Approved NMP required for: "sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and"</p>	<p>Renumbered to clarify - Put the existing language into a list. Delete "and" to account for insertion of additional requirements. Revised to read: : "<u>b.</u> sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and"</p>
	<p>9VAC25-31-505 A 1 c</p>		<p>Add new requirement. New language: "<u>c.</u> <u>mined or disturbed land sites where land application is proposed at greater than agronomic rates; and</u>"</p>
<p>9VAC25-31-505 A</p>	<p>9VAC25-31-505 A 1 d</p>	<p>Universal requirements for land application operations; Approved NMP required for: "sites based on site-specific conditions that increase the risk that land application may adversely impact state waters."</p>	<p>Renumbered to clarify - Put the existing language into a list. Revised to read: "<u>d.</u> sites based on site-specific conditions that increase the risk that land application may adversely impact state waters."</p>
	<p>9VAC25-31-505 A 1 e</p>	<p>Universal requirements for land application operations. NMP requirements</p>	<p>Add new requirement. New language: "<u>e.</u> <u>Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site.</u>" Clarifies that approved NMP is required for these conditions for all sites, not only those included at the time of permit application</p>
	<p>9VAC25-31-505 A 2</p>	<p>Universal requirements for land application operations. NMP requirements</p>	<p>New language: "<u>2.</u> <u>The nutrient management plan shall be available for review by the department at the land application site during biosolids land</u></p>

			<u>application.</u> " To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3
	9VAC25-31-505 A 3	Universal requirements for land application operations. NMP requirements	New language: " <u>3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the nutrient management plan to the farm operator of the site, the Department of Conservation and Recreation and the chief executive officer or designee for the local government, unless they request in writing not to receive the nutrient management plan.</u> " To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3
	9VAC25-31-505 A 4	Universal requirements for land application operations. NMP requirements	New language: " <u>4. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for application sites where the soil test phosphorus levels exceed the values in Table 1 of this section. For purposes of approval, permittees should submit the nutrient management plan to the Department of Conservation and Recreation at least 30 days prior to the anticipated date of land application to ensure adequate time for the approval process.</u> " To be consistent with VPA and clarify requirements in accordance with § 62.1-44.19:3.
	9VAC25-31-505 A - Table 1	Universal requirements for land application operations. NMP requirements	Added: 9VAC25-31-505 Table 1 to identify the P levels that require pre approved NMP. To clarify requirements. Table title " <u>TABLE 1 SOIL PHOSPHORUS LEVELS REQUIRING NMP APPROVAL</u> "; Two columns identified: <u>REGION & Soil Test P (ppm) VPI & SU Test (Mehlich I)*</u> ; Regions identified in table with associated Soil Test P: <u>Eastern Shore and Lower Coastal Plain - 135; Middle and Upper Coastal Plain and Piedmont - 136; & Ridge and Valley - 162</u> ; Footnote included: <u>*If the results are from another laboratory, the Department of Conservation and Recreation approved conversion factors must be used.</u>
9VAC25-31-505 B		Universal requirements for land application operations. "B. Sewage sludge shall be	Corrected terminology: Replaced "sewage sludge" with "biosolids" and to refer to the land application of "biosolids" throughout

		<p>treated to meet standards for land application as required ...No person shall alter the composition of sewage sludge at a site approved for land application of sewage sludge under a Virginia Pollution Abatement Permit. Any person who engages in the alteration of such sewage sludge shall be subject to the penalties...The addition of lime or deodorants to sewage sludge that have been treated to meet standards for land application...shall not constitute alteration of the composition of sewage sludge. The board may authorize public institutions of higher education to conduct scientific research on the composition of sewage sludge that may be applied to land."</p>	<p>the subsection. Revised reference to "a Virginia Pollution Abatement Permit" to "VPDES Permit". Correction of permit program reference. Revised to read: "B. Sewage sludge shall be treated to meet standards for land application of <u>biosolids</u> as required ...No person shall alter the composition of sewage sludge <u>biosolids</u> at a site approved for land application of sewage sludge <u>biosolids</u> under a Virginia Pollution Abatement <u>VPDES</u> Permit. Any person who engages in the alteration of such sewage sludge <u>biosolids</u> shall be subject to the penalties...The addition of lime or deodorants to sewage sludge <u>biosolids</u> that have been treated to meet standards for land application...shall not constitute alteration of the composition of sewage sludge <u>biosolids</u>. The board may authorize public institutions of higher education to conduct scientific research on the composition of sewage sludge <u>biosolids</u> that may be applied to land."</p>
	9VAC25-31-505 C	<p>Universal requirements for land application operations.</p>	<p>Clarification of requirements for "bulk biosolids" added. New language: "<u>C. Bulk biosolids meeting class B pathogen reduction standards shall be land applied in accordance with the Virginia Pollution Permit Regulation, Article 3, Biosolids Use Standards and Practices, set forth in 9VAC25-32-490 through 9VAC25-32-580.</u>"</p>
9VAC25-31-505 C	9VAC25-31-505 D	<p>"C. Surface incorporation may be required on cropland by the department, or the local monitor with approval of the department, to mitigate excessive odors, when incorporation is practicable and compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources</p>	<p>Renumbered to account for the addition of a new requirement. Add reference to "a soil conservation contract". Revised language to read: "C. D. Surface incorporation may be required on cropland by the department, or the local monitor with approval of the department, to mitigate excessive odors <u>malodors</u>, when incorporation is practicable and compatible with a soil conservation plan <u>or contract</u> meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service." Revised based on comments received.</p>

<p>9VAC25-31-505 D</p>	<p>9VAC25-31-505 E</p>	<p>Conservation Service." "D. For applications where surface applied sewage sludge are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances from odor sensitive receptors may be extended...The board, in accordance with 9VAC25-31-460, may impose standards and requirements...either prior to or during sewage sludge use operations."</p>	<p>Renumbered to account for inclusion of new requirement. Replace "sewage sludge" with "biosolids". Deleted references to extending buffer zones - addressed in a separate section of the regulations. Deleted the phrase "buffer zone" to be consistent with usage in the regulations. Revised to read: "D. E. For applications where surface applied sewage sludge <u>biosolids</u> are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances from odor sensitive receptors may be extended...The board, in accordance with 9VAC25-31-460, may impose standards and requirements...either prior to or during sewage sludge use operations."</p>
<p>9VAC25-31-505 E</p>	<p>9VAC25-31-505 F</p>	<p>"E. No person shall apply to the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing storage of sewage sludge without first complying with all requirements adopted pursuant to § 62.1-44.19:3 R of the Code of Virginia."</p>	<p>Renumber to account for the insertion of a new requirement. Add reference to "biosolids". Revised to read: "E-F. No person shall apply to the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing storage of sewage sludge <u>or biosolids</u> without first complying with all requirements adopted pursuant to § 62.1-44.19:3 R of the Code of Virginia."</p>
<p>9VAC25-31-510</p>		<p>"Applicability; bulk sewage sludge; sewage sludge sold or given away in a bag or other container for application to the land."</p>	<p>Revise title to replace "sewage sludge" with "biosolids". Revised to read: "Applicability; bulk-sewage sludge <u>biosolids</u>; sewage sludge <u>biosolids</u> sold or given away in a bag or other container for application to the land."</p>
<p>9VAC25-31-510 A</p>		<p>"A. This subpart applies to any person who prepares sewage sludge that is applied to the land, to any person who applies sewage sludge to the land, to sewage sludge applied to the land, and to land on which sewage sludge is</p>	<p>Replace "sewage sludge" with "biosolids" four times in subsection. Replace the term "subpart" with "article". The term "subpart" is from the federal language and refers to Subpart B, which is the entire "land application" section which would be equivalent to VPDES Part VI Article 2 Biosolids Applied to the Land. That change in terminology is an omission from the</p>

		applied."	original incorporation of the 503 into the VPDES Regulation. Revised to read: "A. This subpart <u>article</u> applies to any person who prepares sewage sludge <u>biosolids</u> that is applied to the land, to any person who applies sewage sludge <u>biosolids</u> to the land, to sewage sludge <u>biosolids</u> applied to the land, and to land on which sewage sludge <u>biosolids</u> is applied."
	9VAC25-31-510 B		Add new subsection title to clarify requirements. New language: " <u>B. General requirements for bulk biosolids.</u> "
9VAC25-31-510 B 1		"B. 1. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply when bulk sewage sludge is applied to the land if the bulk sewage sludge meets the ceiling concentrations in 9VAC25-31-540 B 1..."	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted. Replaced "sewage sludge" with "biosolids". Revised to read: " B. 1. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 <u>B through F</u> do not apply when bulk sewage sludge <u>biosolids</u> is applied to the land if the bulk sewage sludge <u>biosolids</u> meets the ceiling concentrations in 9VAC25-31-540 B 1..."
9VAC25-31-510 B 2		"2. The board may apply any or all of the general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 to the bulk sewage sludge in subdivision 1 of this subsection on a case-by-case basis...to protect public health and the environment from any reasonably anticipated adverse effects that may occur from any pollutant in the bulk sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "2. The board may apply any or all of the general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 to the bulk sewage sludge <u>biosolids</u> in subdivision 1 of this subsection on a case-by-case basis...to protect public health and the environment from any reasonably anticipated adverse effects that may occur from any pollutant in the bulk sewage sludge <u>biosolids</u> ."
	9VAC25-31-510 C		Add new subsection title to clarify requirements. New language: " <u>C. General requirements for bulk material derived from biosolids.</u> "
9VAC25-31-510 C 1		"C. 1. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not	Deleted subsection number to account for added subsection title. Replaced "sewage sludge" with "biosolids". Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes

		apply when a bulk materials derived from sewage sludge is applied to the land..."	distribution and marketing of EQ biosolids and cannot be exempted. Revised to read: " C -1. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply when a bulk material derived from sewage sludge <u>biosolids</u> is applied to the land..."
9VAC25-31-510 C 2		"2. The board may apply any or all the general requirements in 9VAC25-312-530... to protect public health and the environment from any reasonably anticipated adverse effects that may occur from any pollutant in the bulk sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "2. The board may apply any or all the general requirements in 9VAC25-312-530... to protect public health and the environment from any reasonably anticipated adverse effects that may occur from any pollutant in the bulk sewage sludge <u>biosolids</u> ."
9VAC25-31-510 D		"D. The requirements in this article do not apply when a bulk material derived from sewage sludge is applied to the land if the sewage sludge from which the bulk material is derived meets the ceiling concentrations in 9VAC25-31-540 B 1..."	Replace 'sewage sludge" with "biosolids" twice on subsection. Revised to read: "D. The requirements in this article do not apply when a bulk material derived from sewage sludge <u>biosolids</u> is applied to the land if the sewage sludge <u>biosolids</u> from which the bulk material is derived meets the ceiling concentrations in 9VAC25-31-540 B 1..."
9VAC25-31-510 E		"E. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply when sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge sold or given away in a bag or other container for application to the land meets the ceiling concentrations..."	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted. Replaced "sewage sludge" with "biosolids" twice in subsection. Revised to read: "E. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 <u>B through F</u> do not apply when sewage sludge <u>biosolids</u> is sold or given away in a bag or other container for application to the land if the sewage sludge <u>biosolids</u> sold or given away in a bag or other container for application to the land meets the ceiling concentrations..."
9VAC25-31-510 F		"F. The general requirements in 9VAC25-31-530 and the management practices in 9VAC25-31-550 do not apply when a material derived from sewage	Specified exemption of 9VAC25-32-550 B through F; A refers to VPA biosolids part that includes distribution and marketing of EQ biosolids and cannot be exempted. Replace "sewage sludge" with "biosolids". Revised to read: "F. The general requirements in 9VAC25-31-530 and the

		sludge is sold or given away in a bag or other container for application to the land if the derived material meets the ceiling concentrations..."	management practices in 9VAC25-31-550 <u>B through F</u> do not apply when a material derived from sewage sludge <u>biosolids</u> is sold or given away in a bag or other container for application to the land if the derived material meets the ceiling concentrations..."
9VAC25-31-510 G		"G. The requirements of this subpart do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge from which the material is derived meets the ceiling concentrations..."	Replace "sewage sludge" with "biosolids" twice in subsection. Replace the term "subpart" with "article". The term "subpart" is from the federal language and refers to Subpart B, which is the entire "land application" section which would be equivalent to VPDES Part VI Article 2 Biosolids Applied to the Land. That change in terminology is an omission from the original incorporation of the 503 into the VPDES Regulation. Revised to read: "G. The requirements of this subpart <u>article</u> do not apply when a material derived from sewage sludge <u>biosolids</u> is sold or given away in a bag or other container for application to the land if the sewage sludge <u>biosolids</u> from which the material is derived meets the ceiling concentrations..."
9VAC25-31-530 A		"A. No person shall apply sewage sludge to the land except in accordance with the requirements of this article."	Replace "sewage sludge" with "biosolids". Revised to read: "A. No person shall apply sewage sludge <u>biosolids</u> to the land except in accordance with the requirements of this article."
9VAC25-31-530 B		"B. No person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates..."	Replace "sewage sludge" with "biosolids". Revised to read: "B. No person shall apply bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates..."
9VAC25-31-530 D		"D. The person who prepares sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provided the person who applies the bulk sewage sludge written notification of the concentration of total nitrogen (as N on a dry weight basis) in the bulk sewage sludge."	Replace "sewage sludge" with "biosolids" three times in subsection. Revised to read: "D. The person who prepares sewage sludge <u>biosolids</u> that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provided the person who applies the bulk sewage sludge <u>biosolids</u> written notification of the concentration of total nitrogen (as N on a dry weight basis) in the bulk sewage sludge <u>biosolids</u> ."
	9VAC25-31-530 E		Add subsection title to clarify requirements. New language: " <u>E. Application of biosolids to the land.</u> "

<p>9VAC25-31-530 E 1</p>		<p>"E. 1. The person who applies sewage sludge to the land shall obtain information needed to comply with the requirements in this subpart."</p>	<p>Subsection number deleted to account for inclusion of new subsection title. Replace "sewage sludge" with "biosolids". Revised to read: "E. 1. The person who applies sewage sludge <u>biosolids</u> to the land shall obtain information needed to comply with the requirements in this subpart."</p>
<p>9VAC25-31-530 E 2 a</p>	<p>9VAC25-31-530 E 2</p>	<p>"2. a. Before bulk sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 is applied to the land, the person..."</p>	<p>Renumber to clarify and replace "sewage sludge" with "biosolids". Revised to read: "2. a. Before bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 is applied to the land;..."</p>
	<p>9VAC25-31-530 E 2 a</p>	<p>Part of original 9VAC25-31-530 E 2 a. "...the person who proposes to apply the bulk sewage sludge shall contact the department to determine whether bulk sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-530 B 2 has been applied to the site since July 20, 1993."</p>	<p>Renumber to clarify and replace "sewage sludge" with "biosolids". Revised to read: "<u>a.</u> The person who proposes to apply the bulk sewage sludge <u>biosolids</u> shall contact the department to determine whether bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-530 B 2 has been applied to the site since July 20, 1993."</p>
<p>9VAC25-31-530 E 2 b</p>		<p>"b. If bulk sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 has not been applied..."</p>	<p>Replace "sewage sludge" with "biosolids". Revised to read: "b. If bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 has not been applied..."</p>
<p>9VAC25-31-530 E 2 c</p>		<p>"c. If bulk sewage sludge subject to the cumulative loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied the site in the bulk sewage sludge since that date is known..."</p>	<p>Replace "sewage sludge" with "biosolids" twice in subsection. Revised to read: "c. If bulk sewage sludge <u>biosolids</u> subject to the cumulative loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied the site in the bulk sewage sludge <u>biosolids</u> since that date is known..."</p>
<p>9VAC25-31-530 E 2 d</p>		<p>"d. If bulk sewage sludge subject to the cumulative loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied the site in the bulk sewage sludge since that date is not</p>	<p>Replace "sewage sludge" with "biosolids" twice in subsection. Revised to read: "c. If bulk sewage sludge <u>biosolids</u> subject to the cumulative loading rates in 9VAC25-31-540 B 2 has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied the site in the bulk sewage sludge <u>biosolids</u> since that date is not known..."</p>

		known..."	
9VAC25-31-530 F		"F. When a person who prepares bulk sewage sludge provides the bulk sewage sludge to a person who applies the bulk sewage sludge to the land, the person who prepares the bulk sewage sludge shall provide the person who applies the sewage sludge notice and necessary information to comply with the requirements in this article."	Replace "sewage sludge" with "biosolids" five times in subsection. Revised to read: "F. When a person who prepares bulk sewage sludge <u>biosolids</u> provides the bulk sewage sludge <u>biosolids</u> to a person who applies the bulk sewage sludge <u>biosolids</u> to the land, the person who prepares the bulk sewage sludge <u>biosolids</u> shall provide the person who applies the sewage sludge <u>biosolids</u> notice and necessary information to comply with the requirements in this article."
9VAC25-31-530 G		"G. When a person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage sludge, the person who provides the sewage sludge shall provide the person who receives the sewage sludge notice and necessary information to comply with the requirements of this article."	Replace "sewage sludge" with "biosolids" five times in subsection. Revised to read: "G. When a person who prepares sewage sludge <u>biosolids</u> provides the sewage sludge <u>biosolids</u> to another person who prepares sewage sludge <u>biosolids</u> , the person who provides the sewage sludge <u>biosolids</u> shall provide the person who receives the sewage sludge <u>biosolids</u> notice and necessary information to comply with the requirements of this article."
9VAC25-31-530 H		"H. The person who applies bulk sewage sludge to the land shall provide the owner or lease holder of the land on which the bulk sewage sludge is applied notice and necessary information to comply with the requirements of this article."	Replace "sewage sludge" with "biosolids" twice in subsection. Revised to read: "H. The person who applies bulk sewage sludge <u>biosolids</u> to the land shall provide the owner or lease holder of the land on which the bulk sewage sludge <u>biosolids</u> is applied notice and necessary information to comply with the requirements of this article."
9VAC25-31-530 I		"I. Any person who prepares bulk sewage sludge in another state that is applied to land in Virginia shall provide written notice to the department prior to the initial application of bulk sewage sludge to the land application site by the applier. The notice shall	Replace "sewage sludge" with "biosolids" twice in subsection. Revised to read: "I. Any person who prepares bulk sewage sludge <u>biosolids</u> in another state that is applied to land in Virginia shall provide written notice to the department prior to the initial application of bulk sewage sludge <u>biosolids</u> to the land application site by the applier. The notice shall include:"

		include:"	
9VAC25-31-530 I 2		"2. The approximate time period bulk sewage sludge will be applied to the site;"	Replace "sewage sludge" with "biosolids". Revised to read: "2. The approximate time period bulk sewage sludge <u>biosolids</u> will be applied to the site;"
9VAC25-31-530 I 3		"3. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge; and"	Replace "sewage sludge" with "biosolids". Revised to read: "3. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge <u>biosolids</u> ; and"
9VAC25-31-530 I 4		"4. The name, address, telephone number, and National (or Virginia) Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "4. The name, address, telephone number, and National (or Virginia) Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge <u>biosolids</u> ."
9VAC25-31-530 J		"J. Any person who applies bulk sewage sludge subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the land shall provide written notice, prior to the initial application of bulk sewage sludge to a land application site by the applier, to the department and the department shall retain and provide access to the notice. The notice shall include:"	Replace "sewage sludge" with "biosolids" twice in subsection. Revised to read: "J. Any person who applies bulk sewage sludge <u>biosolids</u> subject to the cumulative pollutant loading rates in 9VAC25-31-540 B 2 to the land shall provide written notice, prior to the initial application of bulk sewage sludge <u>biosolids</u> to a land application site by the applier, to the department and the department shall retain and provide access to the notice. The notice shall include:"
9VAC25-31-530 J 2		"2. The name, address, telephone number, and Virginia Pollutant Discharge Elimination System permit number if appropriate) of the person who will apply the bulk sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "2. The name, address, telephone number, and Virginia Pollutant Discharge Elimination System permit number if appropriate) of the person who will apply the bulk sewage sludge <u>biosolids</u> ."
9VAC25-31-540 A		"A. Sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "A. Sewage sludge <u>Biosolids</u> ."
9VAC25-31-540 A 1		"1. Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the	Replace "sewage sludge" with "biosolids" three times in subdivision. Revised to read: "1. Bulk sewage sludge <u>biosolids</u> or sewage sludge <u>biosolids</u> sold or given away in a bag or other container shall not

		concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of this section."	be applied to the land if the concentration of any pollutant in the sewage sludge <u>biosolids</u> exceeds the ceiling concentration for the pollutant in Table 1 of this section."
9VAC25-31-540 A 2		"2. If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:"	Replace "sewage sludge" with "biosolids". Revised to read: "2. If bulk sewage sludge <u>biosolids</u> is applied to agricultural land, forest, a public contact site, or a reclamation site, either:"
9VAC25-31-540 A 2 b		"b. The concentration of each pollutant in the sewage sludge shall not exceed the concentration of the pollutant in Table 3 of 9VAC25-31-540."	Replace "sewage sludge" with "biosolids". Revised reference to clarify requirements. Revised to read: "b. The concentration of each pollutant in the sewage sludge <u>biosolids</u> shall not exceed the concentration of the pollutant in Table 3 of 9VAC25-31-540 <u>this section</u> ."
9VAC25-31-540 A 3		"3. If bulk sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of this section."	Replace "sewage sludge" with "biosolids" twice in subdivision. Revised to read: "3. If bulk sewage sludge <u>biosolids</u> is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge <u>biosolids</u> shall not exceed the concentration for the pollutant in Table 3 of this section."
9VAC25-31-540 A 4		"4. If sewage sludge is sold or given away in a bag or other container for application to the land, either:"	Replace "sewage sludge" with "biosolids". Revised to read: "4. If sewage sludge <u>biosolids</u> is sold or given away in a bag or other container for application to the land, either:"
9VAC25-31-540 A 4 a		"a. The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of this section; or"	Replace "sewage sludge" with "biosolids". Revised to read: "a. The concentration of each pollutant in the sewage sludge <u>biosolids</u> shall not exceed the concentration for the pollutant in Table 3 of this section; or"
9VAC25-31-540 A 4 b		"b. The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of this section to be exceeded. The procedure used to determine the	Replace "sewage sludge" with "biosolids" twice in subdivision. Insert "subsection" reference to clarify requirements. Revised to read: "b. The product of the concentration of each pollutant in the sewage sludge <u>biosolids</u> and the annual whole sludge application rate for the sewage sludge <u>biosolids</u> shall not cause the annual pollutant loading rate for the pollutant in Table 4 of this section to be exceeded. The procedure used to determine the annual whole sludge

		annual whole sludge application rate is presented in D of this section."	application rate is presented in <u>subsection D</u> of this section."
9VAC25-31-540 B		"B. Pollutant concentrations and loading rates - sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "B. Pollutant concentrations and loading rates - sewage sludge <u>biosolids</u> ."
9VAC25-31-540 B – Table 1		Pollutant: Copper; Ceiling Concentration: 4300	Revise to add "comma" in ceiling concentration number. Revised to read: Pollutant: Copper; Ceiling Concentration: 4300 <u>4,300</u>
9VAC25-31-540 B – Table 1		Pollutant: Zinc; Ceiling Concentration: 7500	Revise to add "comma" in ceiling concentration number. Revised to read: Pollutant: Zinc; Ceiling Concentration: 7500 <u>7,500</u>
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES	Add footnote (1) designation to table title. Revised to read: Table 2 CUMULATIVE POLLUTANT LOADING RATES ⁽¹⁾
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES	Add new language as footnote (1) to clarify requirements: New language: " ⁽¹⁾ <u>Such total applications to be made on soils with the biosolids/soil mixture pH adjusted to 6.0 or greater if the biosolids cadmium content is greater than or equal to 21 mg/kg. The maximum cumulative application rate is limited for all ranges of cation exchange capacity due to soil background pH in Virginia of less than 6.5 and lack of regulatory controls of soil pH adjustment after biosolids application ceases.</u> "
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Column headers: Pollutant; Cumulative Pollutant Loading Rate (kilograms per hectare)	Add column and revise table column headers to clarify requirements. Revised to read: Column One: Pollutant; Column Two: <u>Cumulative Pollutant Loading Rate</u> ; Secondary columns under Column Two: <u>Cumulative Pollutant Loading Rate (kilograms per hectare)</u> ; (<u>pounds per acre</u>)
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant: Arsenic	New entry: (pounds per acre): " <u>35</u> ".
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant: Cadmium	New entry: (pounds per acre): " <u>36</u> ".
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant: Copper (kilograms per hectare)	Revised entry: (kilograms per hectare): " 4500 <u>1,500</u> ". New entry: (pounds per acre): " <u>1,340</u> ".

		1500.	
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant: Lead	New entry: (pounds per acre): " <u>270</u> ".
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant: Mercury	New entry: (pounds per acre): " <u>16</u> ".
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES - Pollutant	Add new pollutant and associated footnote to table. Add <u>Molybdenum</u> ⁽²⁾ .
9VAC25-31-540 B – Table 2		Table 2 CUMULATIVE POLLUTANT LOADING RATES	Footnote for Molybdenum - Footnote (2): " ⁽²⁾ <u>The maximum cumulative application rate is currently under study by USEPA. Research suggests that for Molybdenum a cumulative pollutant loading rate below 40 kg/hectare may be appropriate to reduce the risk of copper deficiency in grazing animals.</u> " Based on comments received.
9VAC25-31-540 B Table 3		Table 3 POLLUTANT CONCENTRATIONS - Pollutant: Copper - Monthly Average Concentration (milligrams per kilogram) 1500	Add "comma" to concentration figure. Revise to read: Table 3 POLLUTANT CONCENTRATIONS - Pollutant: Copper - Monthly Average Concentration (milligrams per kilogram) 4500 <u>1,500</u>
9VAC25-31-540 B Table 3		Table 3 POLLUTANT CONCENTRATIONS - Pollutant:	Add pollutant added. New language and associated footnote: <u>Molybdenum</u> ⁽¹⁾ ."
9VAC25-31-540 B Table 3		Table 3 POLLUTANT CONCENTRATIONS	New footnote for Molybdenum to read: " <u>Note: ⁽¹⁾ The monthly average concentration is currently under study by the USEPA. Research suggests that a monthly average Molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.</u> " Based on comments received.
9VAC25-31-540 B Table 3		Table 3 POLLUTANT CONCENTRATIONS - Pollutant: Zinc - Monthly Average Concentration (milligrams per kilogram) 2800	Add "comma" to concentration figure. Revise to read: Table 3 POLLUTANT CONCENTRATIONS - Pollutant: Zinc - Monthly Average Concentration (milligrams per kilogram) 2800 <u>2,800</u>
9VAC25-31-540 B	9VAC25-31-540 B Table 4	"ANNUAL POLLUTANT LOADING RATES - table"	Add " <u>Table 4</u> " designation to the ANNUAL POLLUTANT LOADING RATES table for clarity.
9VAC25-31-540 B		"ANNUAL POLLUTANT LOADING RATES - table column headings: Pollutant & Annual Pollutant Loading Rate (kilograms per	Revise column headers and add subheadings to clarify. Columns revised to read: "Pollutant" & " <u>Annual Pollutant Loading Rate (1) (per 365-day period)</u> ". Sub-column heading: " <u>Annual Pollutant</u>

		hectare per 365 day period)	Loading Rate (kilograms per hectare per 365-day period) (kilograms per hectare). New third column header: <u>(pounds per acre)</u>
9VAC25-31-540 B	9VAC25-31-540 B Table 4		Designation for footnotes added and language for footnote (1) added. New language: " <u>Notes: (1) Such total applications to be made on soils with the biosolids/soil mixture pH adjusted to 6.0 or greater if the biosolids cadmium content is greater than or equal to 21 mg/kg. The maximum cumulative application rate is limited for all ranges of cation exchange capacity due to soil pH in Virginia of less than 6.5 and lack of regulatory controls of soil pH adjustment after biosolids application ceases.</u>
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Arsenic: " <u>1.8</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Cadmium: " <u>1.7</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Copper: " <u>67</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Lead: " <u>13</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Mercury: " <u>0.76</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry and associated Footnote (2) for Pollutant column - " <u>Molybdenum</u> ⁽²⁾ ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New footnote added: " <u>⁽²⁾The maximum cumulative application rate is currently under study by the USEPA.</u> "
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Nickel: " <u>19</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Selenium: " <u>4.6</u> ".
9VAC25-31-540 B	9VAC25-31-540 B Table 4		New entry for new column (pounds per acre) for pollutant - Zinc: " <u>125</u> ".
9VAC25-31-540 C		C. Domestic septage: Equation (1)	Equation (1) language and details moved into a table structure for clarity. Table structure with four rows: <u>EQUATION (1)</u> ;

			<u>AAR = N/0.0026; AAR = Annual application rate in gallons per acre per 365-day period; N = Amount of nitrogen in pounds per acre per 365-day period needed by the crop or vegetation grown on the land.</u>
9VAC25-31-540 D		"D. Procedures to determine the annual whole sludge application rate for sewage sludge. 9VAC25-31-540 A 4 b requires that the product of the concentration for each pollutant listed in Table 4 of this section in sewage sludge sold or given away in a bag or other container for application to the land and the AWSAR for the sewage sludge not cause the annual pollutant loading rate for the pollutant in Table 4 to be exceeded. This section contains the procedures used to determine the AWSAR for a sewage sludge that does not cause the annual pollutant loading rates in Table 4 of this section to be exceeded."	Replace "sewage sludge" with "biosolids" four times in subsection. Revised to read: "D. Procedures to determine the annual whole sludge application rate for sewage sludge biosolids. 9VAC25-31-540 A 4 b requires that the product of the concentration for each pollutant listed in Table 4 of this section in sewage sludge biosolids sold or given away in a bag or other container for application to the land and the AWSAR for the sewage sludge biosolids not cause the annual pollutant loading rate for the pollutant in Table 4 to be exceeded. This section contains the procedures used to determine the AWSAR for a sewage sludge biosolids that does not cause the annual pollutant loading rates in Table 4 of this section to be exceeded."
9VAC25-31-540 D	9VAC25-31-540 D 1	Portion of original 9VAC25-31-540 D: "The relationship between the APLR for a pollutant and the AWSAR for a sewage sludge is shown in equation (1)."	Subdivisions numbered to clarify. Replace "sewage sludge" with "biosolids". Renumber equation (1) to equation (2) to avoid confusion with previous equation (1). Revised to read: " <u>1.</u> The relationship between the APLR for a pollutant and the AWSAR for a sewage sludge biosolids is shown in equation (1) (2)."
9VAC25-31-540 D	9VAC25-31-540 D 1	Equation (1).	Renumber equation (1) to equation (2) to avoid confusion with previous equation (1). Equation moved and restructured into a table format for clarity. Table with 6 rows: " <u>EQUATON (2); APLR = C X AWSAR X 0.001; APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period; C = Pollutant concentration in milligrams per kilograms of total solids (dry weight basis); AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight</u>

			basis); 0.001 = A conversion factor"
9VAC25-31-540 D	9VAC25-31-540 D 2	Portion of original 9VAC25-31-540 D: "To determine the AWSAR, equation (1) is rearranged into equation (2)."	Subdivisions numbered to clarify. Renumber equations to clarify requirements. Revised to read: " <u>2.</u> To determine the AWSAR, equation (4) (<u>2</u>) is rearranged into equation (2)(<u>3</u>)."
9VAC25-31-540 D	9VAC25-31-540 D 2	Equation (2).	Equation (2) renumbered to Equation (3) and moved and restructured into a table format for clarity. Table with six rows: <u>EQUATION (3); AWSAR = APLR/(C X 0.001); AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis); APLR =Annual pollutant loading rate in kilograms per hectare per 365-day period; C = Pollutant concentration in milligrams per kilogram of total solids (dry weight basis); 0.001 = A conversion factor"</u>
9VAC25-31-540 D	9VAC25-31-540 D 3	Portion of original 9VAC25-31-540 D: "The procedure used to determine the AWSAR for a sewage sludge is presented below:"	Subdivisions numbered to clarify. Replace "sewage sludge" with "biosolids". Revised to read: " <u>3.</u> The procedure used to determine the AWSAR for a sewage sludge <u>biosolids</u> is presented below."
9VAC25-31-540 D 1	9VAC25-31-540 D 3 a	"1. Analyze a sample of the sewage sludge to determine the concentration for each of the pollutants listed in Table 4 of this section in the sewage sludge."	Renumber to clarify. Replace "sewage sludge" with "biosolids". Revised to read: " <u>1.a.</u> Analyze a sample of the sewage sludge <u>biosolids</u> to determine the concentration for each of the pollutants listed in Table 4 of this section in the sewage sludge <u>biosolids</u> ."
9VAC25-31-540 D 2	9VAC25-31-540 D 3 b	"2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of this section, calculate an AWSAR for each pollutant using equation (2) above."	Renumber to clarify and correct table reference. Revised to read: " <u>2.b.</u> Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of this section, calculate an AWSAR for each pollutant using equation (2) (<u>3</u>) above."
9VAC25-31-540 D 3	9VAC25-31-540 D 3 c	"3. The AWSAR for the sewage sludge is the lowest AWSAR calculated in Step 2."	Renumber to clarify. Replace "sewage sludge" with "biosolids". Revised to read: " <u>3.c.</u> The AWSAR for the sewage sludge <u>biosolids</u> is the lowest AWSAR calculated in Step 2."
	9VAC25-31-543		Add new section to address "Soil monitoring". New language: " <u>9VAC25-31-543. Soils monitoring.</u> "
9VAC25-31-543 A	9VAC25-31-543 A		New language added: "A. Soil shall be sampled and analyzed prior to biosolids application to determine site suitability and to provide background data. No sample analysis used to determine application

			rates shall be more than 3 years old at the time of biosolids land application. Soil shall be sampled and analyzed in accordance with Table 1 of this section. Reduced monitoring may also apply to one-time biosolids applications to forest or reclaimed lands. For background analysis, random composite soil samples from the zone of incorporation are required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre)."
	9VAC25-31-543 A Table 1		Added new table to clarify requirements. New language added in table structure: " <u>Table 1 SOIL TEST PARAMETERS FOR LAND APPLICATION SITES¹</u> ; Table with 10 rows: <u>Parameter: Soil pH (Std. Units)</u> ; <u>Available phosphorus (ppm)²</u> ; <u>Extractable potassium (ppm)</u> ; <u>Extractable sodium (mg/100 g)³</u> ; <u>Extractable calcium (mg/100g)</u> ; <u>Extractable magnesium (mg/100g)</u> ; <u>Zinc (ppm)</u> ; <u>Manganese (ppm)</u> ; ¹ <u>Note: Unless otherwise stated, analyses shall be reported on a dry weight basis;</u> ² <u>Available P shall be analyzed using one of the following methods: Mehlich I or Mehlich III;</u> ³ <u>Extractable sodium shall be analyzed only where biosolids known to be high in sodium will be land applied.</u> "
	9VAC25-31-543 B		New language: " <u>B. The department reserves the right to require the permit holder to conduct additional soil monitoring including, but not limited to, additional parameters, based on site-specific history or conditions.</u> " Added to clarify requirements.
	9VAC25-31-543 C		New language added to clarify requirements. New language: " <u>C. Samples shall be collected in accordance with § 10.1-104.2 of the Code of Virginia.</u> "
9VAC25-31-545 A - D		Crop Monitoring; conducted at growth stage as recommended by Virginia Department of Agriculture and Consumer Services and DCR	Strike entire section, because the regulation now requires NMP for all sites, crop monitoring will not be required
	9VAC25-31-547		Added new section to specify requirements for "groundwater monitoring". New language: " <u>9VAC25-31-547. Groundwater</u>

			monitoring."
	9VAC25-31-547 A		Added specify groundwater monitoring requirement. New language: " <u>A. Monitoring wells may be required by the department for land treatment sites, sludge lagoons, biosolids land application sites or biosolids storage facilities to monitor groundwater quality.</u> "
	9VAC25-31-547 B		Added specify groundwater monitoring requirement. New language: " <u>B. If groundwater monitoring is required, a groundwater monitoring plan shall be submitted to the department for approval that includes at a minimum:</u> "
	9VAC25-31-547 B 1		Add specify requirement for groundwater monitoring plan. New language: " <u>1. Geologic and hydrologic conditions at the site;</u> "
	9VAC25-31-547 B 2		Add specify requirement for groundwater monitoring plan. New language: " <u>2. Monitoring well design, placement, and construction;</u> "
	9VAC25-31-547 B 3		Add specify requirement for groundwater monitoring plan. New language: " <u>3. Sampling frequency;</u> "
	9VAC25-31-547 B 4		Add specify requirement for groundwater monitoring plan. New language: " <u>4. Sampling procedures, including quality assurance and quality control; and</u> "
	9VAC25-31-547 B 5		Add specify requirement for groundwater monitoring plan. New language: " <u>Collection of background samples.</u> "
	9VAC25-31-550 A		Add new subsection regarding compliance with operational requirements. New language: " <u>A. All biosolids land application activities shall comply with the operational requirements of Part IX (9VAC25-32-303 et seq.) of 9VAC25-32 (Biosolids Program of the VPA Permit Regulation).</u> "
9VAC25-31-550 A	9VAC25-31-550 B	"A. Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed in 9VAC25-260-320 or § 4 of the Endangered Species Act (16 USC § 1533) or if the land application is likely to	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: " <u>A-B. Bulk sewage sludge biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed in 9VAC25-260-320 or § 4 of the Endangered Species Act (16 USC § 1533) or if the land application is likely to adversely affect its designated critical</u> "

		adversely affect its designated critical habitat."	habitat."
9VAC25-31-550 B	9VAC25-31-550 C	"B. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other surface waters except as provided in a VPDES permit or a permit issued pursuant to § 404 of the CWA."	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: " B-C Bulk sewage sludge <u>biosolids</u> shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge <u>biosolids</u> enters a wetland or other surface waters except as provided in a VPDES permit or a permit issued pursuant to § 404 of the CWA."
9VAC25-31-550 C	9VAC25-31-550 D	"C. Bulk sewage sludge shall not be applied to agricultural land, forest, or a reclamation site that is 10 meters or less from surface waters, unless otherwise specified by the board."	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: " C-D Bulk sewage sludge <u>biosolids</u> shall not be applied to agricultural land, forest, or a reclamation site that is 10 meters or less from surface waters, unless otherwise specified by the board."
9VAC25-31-550 D	9VAC25-31-550 E	"D. Bulk sewage sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sewage sludge, unless, in the case of a reclamation site, otherwise specified by the board."	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: " D-E Bulk sewage sludge <u>biosolids</u> shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sewage sludge <u>biosolids</u> , unless, in the case of a reclamation site, otherwise specified by the board."
9VAC25-31-550 E	9VAC25-31-550 F	"E. Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:"	Revise language to include phrase "in a bag or". Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: " E-F Either a label shall be affixed to the bag or other container in which sewage sludge <u>biosolids</u> that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge <u>biosolids</u> sold or given away in an a bag or other container for application to the land. The label or information sheet shall contain the following information:" Revised to clarify requirements.

9VAC25-31-550 E 1	9VAC25-31-550 F 1	"1. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land;"	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: "1. The name and address of the person who prepared the sewage sludge <u>biosolids</u> that is sold or given away in a bag or other container for application to the land;"
9VAC25-31-550 E 2	9VAC25-31-550 F 2	"2. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet; and"	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: "2. A statement that application of the sewage sludge <u>biosolids</u> to the land is prohibited except in accordance with the instructions on the label or information sheet; and"
9VAC25-31-550 E 3	9VAC25-31-550 F 3	"3. The annual whole sludge application rate for the sewage sludge that does not cause any of the annual pollutant loading rates in Table 4 of 9VAC25-31-540 to be exceeded."	Renumber to account for addition of new subsection. Replace "sewage sludge" with "biosolids". Revised to read: "3. The annual whole sludge application rate for the sewage sludge <u>biosolids</u> that does not cause any of the annual pollutant loading rates in Table 4 of 9VAC25-31-540 to be exceeded."
9VAC25-31-560 A		"A. Pathogens – sewage sludge.	Replace "sewage sludge" with "biosolids". Revised to read: "A. Pathogens – sewage sludge <u>biosolids</u> ."
9VAC25-31-560 A 1		"1. The Class A pathogen requirements in 9VAC25-31-710 A or the Class B pathogen requirements and site restrictions in 9VAC25-31-720 B shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site."	Replace "sewage sludge" with "biosolids". Revised to read: "1. The Class A pathogen requirements in 9VAC25-31-710 A or the Class B pathogen requirements and site restrictions in 9VAC25-31-720 B shall be met when bulk sewage sludge <u>biosolids</u> is applied to agricultural land, forest, a public contact site, or a reclamation site."
9VAC25-31-560 A 2		"2. The Class A pathogen requirements in 9VAC25-31-710 A shall be met when bulk sewage sludge is applied to a lawn or a home garden."	Replace "sewage sludge" with "biosolids". Revised to read: "2. The Class A pathogen requirements in 9VAC25-31-710 A shall be met when bulk sewage sludge <u>biosolids</u> is applied to a lawn or a home garden."
9VAC25-31-560 A 3		"3. The Class A pathogen requirements in 9VAC25-31-710 A shall be met when sewage sludge is sold or given away in a bag or other container for application to the land."	Replace "sewage sludge" with "biosolids". Revised to read: "3. The Class A pathogen requirements in 9VAC25-31-710 A shall be met when sewage sludge <u>biosolids</u> is sold or given away in a bag or other container for application to the land."

9VAC25-31-560 C		"C. Vector attraction reduction – sewage sludge."	Replace "sewage sludge" with "biosolids". Revised to read: "C. Vector attraction reduction – sewage sludge biosolids."
9VAC25-31-560 C 1		"1. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site."	Replace "sewage sludge" with "biosolids". Revised to read: "1. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site."
9VAC25-31-560 C 2		"2. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge is applied to a lawn or home garden."	Replace "sewage sludge" with "biosolids". Revised to read: "2. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge biosolids is applied to a lawn or home garden."
9VAC25-31-560 C 3		"3. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge is sold or given away in a bag or other container for application to the land."	Replace "sewage sludge" with "biosolids". Revised to read: "3. One of the vector reduction requirements in 9VAC25-31-720 B 1 through B 10 shall be met when bulk sewage sludge biosolids is sold or given away in a bag or other container for application to the land."
9VAC25-31-570 A		"A. Sewage sludge."	Replace "Sewage sludge" with "Biosolids". Revised to read: "A. Sewage sludge Biosolids."
9VAC25-31-570 A 1		Table 1 – "Amount of sewage sludge (metric tons per 365 day period)"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: Table 1 – "Amount of sewage sludge biosolids (metric tons per 365 day period)"
9VAC25-31-570 A 1		Table 1 footnote: "*Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge prepared for sale or give-away in a bag or other container for application to the land (dry weight basis)."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: Table 1 footnote: "*Either the amount of bulk sewage sludge biosolids applied to the land or the amount of sewage sludge biosolids prepared for sale or give-away in a bag or other container for application to the land (dry weight basis)."
9VAC25-31-570 A 2		"2. After the sewage sludge has been monitored for two years..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "2. After the sewage sludge biosolids has been monitored for two years..."
9VAC25-31-580 A		"A. Sewage sludge."	Replace "Sewage sludge" with "Biosolids". Revised to read: "A. Sewage sludge Biosolids."

9VAC25-31-580 A 1	"1. The person who prepares the sewage sludge in 9VAC25-31-510 B 1 or E..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "1. The person who prepares the sewage sludge <u>biosolids</u> in 9VAC25-31-510 B 1 or E..."
9VAC25-31-580 A 1 a	"a. The concentration of each pollutant listed in Table 3 of 9VAC25-31-540 in the sewage sludge."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "a. The concentration of each pollutant listed in Table 3 of 9VAC25-31-540 in the sewage sludge <u>biosolids</u> ."
9VAC25-31-580 A 3	"3. If the pollutant concentrations in ...are met when bulk sewage sludge is applied..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "3. If the pollutant concentrations in ...are met when bulk sewage sludge <u>biosolids</u> is applied..."
9VAC25-31-580 A 3 a	"a. The person who prepares the bulk sewage sludge shall develop the following information..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "a. The person who prepares the bulk sewage sludge <u>biosolids</u> shall develop the following information..."
9VAC25-31-580 A 3 a (1)	"(1) The concentration of each pollutant listed in Table 3 of 9VAC25-31-540 in the bulk sewage sludge;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(1) The concentration of each pollutant listed in Table 3 of 9VAC25-31-540 in the bulk sewage sludge <u>biosolids</u> ;"
9VAC25-31-580 A 3 b	"b. The person who applies the bulk sewage sludge shall develop the following information..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "b. The person who applies the bulk sewage sludge <u>biosolids</u> shall develop the following information..."
9VAC25-31-580 A 3 b (2)	"(2) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge is applied; and"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(2) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge <u>biosolids</u> is applied; and"
9VAC25-31-580 A 3 b (3)	"(3) A description of how the vector attraction requirements...are met for each site on which bulk sewage sludge is applied."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(3) A description of how the vector attraction requirements...are met for each site on which bulk sewage sludge <u>biosolids</u> is applied."
9VAC25-31-580 A 4	"4. If the pollutant concentrations...are met when bulk sewage sludge is applied..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "4. If the pollutant concentrations...are met when bulk sewage sludge <u>biosolids</u> is applied..."
9VAC25-31-580 A 4 a	"a. The person who prepares the bulk sewage sludge shall develop the	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "a. The person who prepares the bulk

		following information..."	sewage sludge biosolids shall develop the following information..."
9VAC25-31-580 A 4 a (1)		"(1) The concentration of each pollutant...in the bulk sewage sludge;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(1) The concentration of each pollutant...in the bulk sewage sludge biosolids ;"
9VAC25-31-580 A 4 b		"b. The person who applies the bulk sewage sludge shall develop the following..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "b. The person who applies the bulk sewage sludge biosolids shall develop the following..."
9VAC25-31-580 A 4 b (1)		"(1) The following certification statement: I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge is applied under my direction..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(1) The following certification statement: I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge biosolids is applied under my direction..."
9VAC25-31-580 A 4 b (2)		"(2) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge is applied;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(2) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge biosolids is applied;"
9VAC25-31-580 A 4 b (3)		"(3) a description of how the site restrictions in 9VAC25-31-710 B 5 are met for each site on which bulk sewage sludge is applied;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(3) a description of how the site restrictions in 9VAC25-31-710 B 5 are met for each site on which bulk sewage sludge biosolids is applied;"
9VAC25-31-580 A 4 b (5)		"(5) The date bulk sewage sludge is applied to each site."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(5) The date bulk sewage sludge biosolids is applied to each site."
9VAC25-31-580 A 5		"5. If the requirements in 9VAC25-31-540 A 2 a are met when bulk sewage sludge is applied..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "5. If the requirements in 9VAC25-31-540 A 2 a are met when bulk sewage sludge biosolids is applied..."
9VAC25-31-580 A 5 a		"a. The person who prepares the bulk sewage sludge shall develop the following..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "a. The person who prepares the bulk sewage sludge biosolids shall develop the following..."
9VAC25-31-580 A 5 a (1)		"(1) The concentration of each pollutant listed in Table 1 of 9VAC25-31-540 in the bulk sewage sludge;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(1) The concentration of each pollutant listed in Table 1 of 9VAC25-31-540 in the bulk sewage sludge biosolids ;"

9VAC25-31-580 A 5 b	"b. The person who applies the bulk sewage sludge shall develop the following..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "b. The person who applies the bulk sewage sludge <u>biosolids</u> shall develop the following..."
9VAC25-31-580 A 5 b (1)	"(1) The location...on which bulk sewage sludge is applied;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(1) The location...on which bulk sewage sludge <u>biosolids</u> is applied;"
9VAC25-31-580 A 5 b (2)	"(2) The number of hectares in each site on which bulk sewage sludge is applied;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(2) The number of hectares in each site on which bulk sewage sludge <u>biosolids</u> is applied;"
9VAC25-31-580 A 5 b (3)	"(3) The date bulk sewage sludge is applied to each sites;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(3) The date bulk sewage sludge <u>biosolids</u> is applied to each sites;"
9VAC25-31-580 A 5 b (4)	"(4) The cumulative amount of each pollutant...in the bulk sewage sludge applied to each site..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(4) The cumulative amount of each pollutant...in the bulk sewage sludge <u>biosolids</u> applied to each site..."
9VAC25-31-580 A 5 b (5)	"(5) The amount of sewage sludge (i.e., metric tons) applied to each site."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(5) The amount of sewage sludge <u>biosolids</u> (i.e., metric tons) applied to each site."
9VAC25-31-580 A 5 b (6)	"(6) The following certification statement: "I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge is applied under my direction..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(6) The following certification statement: "I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge <u>biosolids</u> is applied under my direction..."
9VAC25-31-580 A 5 b (8)	"(8) The following certification statement: " I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge is applied under my direction..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(8) The following certification statement: " I certify, under penalty of law, that the information...was prepared for each site on which bulk sewage sludge <u>biosolids</u> is applied under my direction..."
9VAC25-31-580 A 5 b (9)	"(9) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge is applied;"	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(9) A description of how the management practices in 9VAC25-31-550 are met for each site on which bulk sewage sludge <u>biosolids</u> is applied;"

<p>9VAC25-31-580 A 5 b (10)</p>		<p>"(10) The following certification statement when the bulk sewage sludge meets the Class B pathogen requirements..."</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(10) The following certification statement when the bulk sewage sludge <u>biosolids</u> meets the Class B pathogen requirements..."</p>
<p>9VAC25-31-580 A 5 b (11)</p>		<p>"(11) A description of how the site restrictions in 9VAC25-31-710 B 5 are met for each site on which Class B bulk sewage sludge is applied;"</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "(11) A description of how the site restrictions in 9VAC25-31-710 B 5 are met for each site on which Class B bulk sewage sludge <u>biosolids</u> is applied;"</p>
<p>9VAC25-31-580 A 6</p>		<p>"6. If the requirements in 9VAC25-31-540 A 4 b are met when sewage sludge is sold or given away in a bag...the person who prepares the sewage sludge that is sold or given away in a bag..."</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "6. If the requirements in 9VAC25-31-540 A 4 b are met when sewage sludge <u>biosolids</u> is sold or given away in a bag...the person who prepares the sewage sludge <u>biosolids</u> that is sold or given away in a bag..."</p>
<p>9VAC25-31-580 A 6 a</p>		<p>"a. The annual whole sludge application rate for the sewage sludge that does not cause the annual loading rates in Table 4 of 9VAC25-31-540 to be exceeded;"</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "a. The annual whole sludge application rate for the sewage sludge <u>biosolids</u> that does not cause the annual loading rates in Table 4 of 9VAC25-31-540 to be exceeded;"</p>
<p>9VAC25-31-580 A 6 b</p>		<p>"b. The concentration of each pollutant...in the sewage sludge;"</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "b. The concentration of each pollutant...in the sewage sludge <u>biosolids</u>;"</p>
<p>9VAC25-31-580 B 4</p>		<p>"4. The nitrogen requirement for the crop or vegetation grown on each site during a 365-day period;"</p>	<p>Added "phosphorus" to the requirements. Revised to read: "4. The nitrogen <u>and</u> <u>phosphorus</u> requirement for the crop or vegetation grown on each site during a 365-day period;" Revised to clarify requirements.</p>
	<p>9VAC25-31-590 B</p>		<p>Add activity report requirement for consistency with VPA. New language added: "<u>B. An activity report shall be submitted (electronically or postmarked) to the department by the 15th of each month for land application activity that occurred in the previous calendar month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4. The report shall indicate those sites where land application activities took place during the previous month. If no land application</u></p>

			<p>occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred."</p> <p>Developed to clarify requirements and to be consistent with changes made to Fee regulations.</p>
	9VAC25-31-590 C		<p>New language from 9VAC25-31-590 D. Added record maintenance requirements from 9VAC25-31-440. Based on comments received and to clarify requirements. New language added: "<u>C. Records shall be maintained documenting the required treatment and quality characteristics and the maximum allowable land application loading rates established for biosolids use. In addition, operational monitoring results shall verify that required sludge treatment has achieved the specified levels of pathogen control and vector attraction reductions (9VAC25-31-710 and 9VAC25-31-720). Adequate records of biosolids composition, treatment classification, and biosolids application rates and methods of application for each site shall be maintained by the generator and owner.</u>"</p>
	9VAC25-31-590 D		<p>Added generator and owner record maintenance requirement from 9VAC25-31-440. New language added: "<u>D. The generator and owner shall maintain the records for a minimum period of five years. Sites receiving the frequent applications of biosolids that meet or exceed maximum cumulative constituent loadings and dedicated disposal sites should be properly referenced for future land transactions (Sludge Disposal Site Dedication Form).</u>"</p>
9VAC25-31-690 A		"A. This article contains requirements for a sewage sludge to be classified either Class A or Class B with respect to pathogens."	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "A. This article contains requirements for a sewage sludge <u>biosolids</u> to be classified either Class A or Class B with respect to pathogens."</p>
9VAC25-31-690 B		"B. This article contains the site restrictions for land on which a Class B sewage sludge is applied."	<p>Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "B. This article contains the site restrictions for land on which a Class B sewage sludge <u>biosolids</u> is applied."</p>
9VAC25-31-690 D		"D. This article contains alternative vector attraction reduction requirement for	<p>Correct terminology. Replace "sewage sludge" with "biosolids" and insert "sewage sludge". Revised to read: "D. This article</p>

		sewage sludge that is applied to the land or placed on a surface disposal site."	contains alternative vector attraction reduction requirement for sewage sludge biosolids that is applied to the land or sewage sludge that is placed on a surface disposal site. "
9VAC25-31-710 A		"A. Sewage sludge – Class A."	Correct terminology. Replace "Sewage sludge" with "Biosolids". Revised to read: "A. Sewage sludge <u>Biosolids</u> – Class A."
9VAC25-31-710 A 1		"1. The requirement in subdivision 2...shall be met for a sewage sludge to be classified Class A with respect to pathogens."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "1. The requirement in subdivision 2...shall be met for a sewage sludge <u>biosolids</u> to be classified Class A with respect to pathogens."
9VAC25-31-710 A 3 a		"a. Either the density of fecal coliform in the sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	Correct terminology. Replace "sewage sludge" with "biosolids" six times in subdivision. Revised to read: "a. Either the density of fecal coliform in the sewage sludge <u>biosolids</u> shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge <u>biosolids</u> shall be less than three...at the time the sewage sludge <u>biosolids</u> is used or disposed, at the time the sewage sludge <u>biosolids</u> is prepared for sale or give-away...or at the time the sewage sludge <u>biosolids</u> or material derived from sewage sludge <u>biosolids</u> is prepared..."
9VAC25-31-710 A 3 b (1)		"(1) When the percent solids of the sewage sludge is 7.0%...and time period shall be determined using equation (3), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid."	Revise notation to refer to equation (1). Revised to read: "(1) When the percent solids of the sewage sludge is 7.0%...and time period shall be determined using equation (3) <u>equation (1)</u> , except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid."
9VAC25-31-710 A 3 b (1)		Equation (3).	Renamed to equation (1) and restructured into a table format for clarity. Table with four rows: " <u>EQUATION (1)</u> ; <u>D = 131,700,000/10^{0.1400t}</u> ; <u>D = time in days</u> ; <u>t = temperature in degrees Celsius</u> "
9VAC25-31-710 A 3 b (2)		"(2) When the percent solids of the sewage sludge is 7.0%...shall be determined using equation (3)."	Revise to refer to equation (1) to account for renumbering of equations of this section. Revised to read: "(2) When the percent solids of the sewage sludge...shall be determined using equation (3) <u>equation (1)</u> ."
9VAC25-31-710		"(3) When the percent	Revise to refer to equation (1) to account

<p>A 3 b (3)</p>		<p>solids of the sewage sludge is less than 7%...shall be determined using equation (3)."</p>	<p>for renumbering of equations of this section. Revised to read: "(3) When the percent solids of the sewage sludge is less than 7%...shall be determined using equation (3)equation (1)."</p>
<p>9VAC25-31-710 A 3 b (4)</p>		<p>"(4) When the percent solids of sewage sludge is less than 7.0%...shall be determined using equation (4)."</p>	<p>Revise to refer to equation (2) to account for renumbering of equations of this section. Revised to read: "(4) When the percent solids of sewage sludge is less than 7.0%...shall be determined using equation (4)equation (2)."</p>
<p>9VAC25-31-710 A 3 b (4)</p>		<p>Equation (4).</p>	<p>Renamed "equation (2) and moved into a table structure for clarity. Revised to a table with four rows: "EQUATION (2); $D = 50,070,000/10^{0.1400t}$; $D =$ time in days; $t =$ temperature in degrees Celsius"</p>
<p>9VAC25-31-710 A 4 a</p>		<p>"a. Either the density of fecal coliform in the sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids" six times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "a. Either the density of fecal coliform in the sewage sludge<u>biosolids</u> shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge<u>biosolids</u> shall be less than three...at the time the sewage sludge<u>biosolids</u> is used or disposed, at the time the sewage sludge<u>biosolids</u> is prepared for sale or give-away...or at the time the sewage sludge<u>biosolids</u> or material derived from sewage sludge<u>biosolids</u> is prepared..."</p>
<p>9VAC25-31-710 A 5 a</p>		<p>"a. Either the density of fecal coliform in the sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids" six times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "a. Either the density of fecal coliform in the sewage sludge<u>biosolids</u> shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge<u>biosolids</u> shall be less than three...at the time the sewage sludge<u>biosolids</u> is used or disposed, at the time the sewage sludge<u>biosolids</u> is prepared for sale or give-away...or at the time the sewage sludge<u>biosolids</u> or material derived from sewage sludge<u>biosolids</u> is prepared..."</p>
<p>9VAC25-31-710 A 6 a</p>		<p>"a. Either the density of fecal coliform in the</p>	<p>Correct terminology. Replace "sewage sludge" with "biosolids" six times in</p>

		sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "a. Either the density of fecal coliform in the sewage sludge <u>biosolids</u> shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge <u>biosolids</u> shall be less than three...at the time the sewage sludge <u>biosolids</u> is used or disposed, at the time the sewage sludge <u>biosolids</u> is prepared for sale or give-away...or at the time the sewage sludge <u>biosolids</u> or material derived from sewage sludge <u>biosolids</u> is prepared..."
9VAC25-31-710 A 6 b		"b. The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	Correct terminology. Replace "sewage sludge" with "biosolids" five times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "b. The density of enteric viruses in the sewage sludge <u>biosolids</u> shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge <u>biosolids</u> is used or disposed; at the time the sewage sludge <u>biosolids</u> is prepared for sale or give-away...or at the time the sewage sludge <u>biosolids</u> or material derived from sewage sludge <u>biosolids</u> is prepared..."
9VAC25-31-710 A 6 c		"c. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	Correct terminology. Replace "sewage sludge" with "biosolids" five times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "c. The density of viable helminth ova in the sewage sludge <u>biosolids</u> shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge <u>biosolids</u> is used or disposed; at the time the sewage sludge <u>biosolids</u> is prepared for sale...or at the time the sewage sludge <u>biosolids</u> or material derived from sewage sludge <u>biosolids</u> is prepared..."
9VAC25-31-710 A 7 a		"a. Either the density of fecal coliform in the sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be	Correct terminology. Replace "sewage sludge" with "biosolids" six times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "a. Either the density of fecal coliform in the sewage

		less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	sludge-biosolids shall be less than...or the density of Salmonella sp. bacteria in the sewage-sludge-biosolids shall be less than three...at the time the sewage-sludge-biosolids is used or disposed, at the time the sewage-sludge-biosolids is prepared for sale or give-away...or at the time the sewage-sludge-biosolids or material derived from sewage-sludge-biosolids is prepared..."
9VAC25-31-710 A 7 a		"b. Sewage sludge that is used or disposed shall be treated in one of the processes to further reduce pathogens described in 9VAC25-31-710 E."	Correct terminology. Replace "Sewage sludge" with "Biosolids". Correct subsection reference. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "b. Sewage sludge <u>Biosolids</u> that is used or disposed shall be treated in one of the processes to further reduce pathogens described in 9VAC25-31-710 E <u>subsection E of this section.</u> "
9VAC25-31-710 A 8 a		"a. Either the density of fecal coliform in the sewage sludge shall be less than...or the density of Salmonella sp. bacteria in the sewage sludge shall be less than three...at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give-away...or at the time the sewage sludge or material derived from sewage sludge is prepared..."	Correct terminology. Replace "sewage sludge" with "biosolids" six times in subdivision. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "a. Either the density of fecal coliform in the sewage sludge-biosolids shall be less than...or the density of Salmonella sp. bacteria in the sewage-sludge-biosolids shall be less than three...at the time the sewage-sludge-biosolids is used or disposed, at the time the sewage-sludge-biosolids is prepared for sale or give-away...or at the time the sewage-sludge-biosolids or material derived from sewage-sludge-biosolids is prepared..."
9VAC25-31-710 A 8 b		"b. Sewage sludge that is used or disposed shall be treated in one of the processes to further reduce pathogens, as determined by the board."	Correct terminology. Replace "sewage sludge" with "biosolids. To clarify requirements and to use consistent terminology throughout the regulations. Revised to read: "b. Sewage-sludge <u>Biosolids</u> that is used or disposed shall be treated in one of the processes to further reduce pathogens, as determined by the board."
9VAC25-31-710 B		B. Sewage sludge - Class B.	Correct terminology. Replace "Sewage sludge" with "Biosolids. To clarify requirements and to use consistent

			terminology throughout the regulations. Revised to read: B. <u>Sewage sludge Biosolids</u> - Class B.
9VAC25-31-710 B 1 a	9VAC25-31-710 B 1	"1. a. The requirements in either 9VAC25-31-710 B 2, B 3, or B 4 shall be met for a sewage sludge to be classified Class B with respect to pathogens."	Revise subdivision numbering to clarify requirements. Correct terminology: Replace "sewage sludge" with "biosolids". Revised to read: "1. a. The requirements in either 9VAC25-31-710 B 2, B 3, or B 4 <u>subdivision 3, 4, or 5 of this subsection</u> shall be met for a sewage sludge <u>biosolids</u> to be classified Class B with respect to pathogens."
9VAC25-31-710 B 1 b	9VAC25-31-710 B 2	"b. The site restrictions in 9VAC25-31-710 B 5 shall be met when sewage sludge that meets Class B pathogen requirements in 9VAC25-31-710 B 2, B 3, or B 4 is applied to the land."	Revise subdivision numbering to clarify requirements. Correct terminology: Replace "sewage sludge" with "biosolids". Revised to read: " b. 2. The site restrictions in 9VAC25-31-710 B 5 <u>subdivision 6 of this subsection</u> shall be met when sewage sludge <u>biosolids</u> that meets Class B pathogen requirements in 9VAC25-31-710 B 2, B 3, or B 4 <u>subdivision 3, 4, or 5 of this subsection</u> is applied to the land."
9VAC25-31-710 B 2	9VAC25-31-710 B 3	"2. Class B – Alternative 1."	Revise subdivision numbering to clarify requirements. Revise to read: " 2-3. Class B – Alternative 1."
9VAC25-31-710 B 2 a	9VAC25-31-710 B 3 a	"a. Seven representative samples of sewage sludge that is used or disposed shall be collected."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "a. Seven representative samples of sewage sludge <u>biosolids</u> that is used or disposed shall be collected."
9VAC25-31-710 B 2 b	9VAC25-31-710 B 3 b	"b. The geometric mean of the density of fecal coliform in the samples collected in subdivision 2 a of this subsection..."	Revise subdivision numbering to clarify requirements. Correct subdivision reference to account for revised numbering. Revise to read: "b. The geometric mean of the density of fecal coliform in the samples collected in subdivision 2-3 <u>a</u> of this subsection..."
9VAC25-31-710 B 3	9VAC25-31-710 B 4	"3. Class B – Alternative 2. Sewage sludge that is used or disposed shall be treated in one of the processes to significantly reduce pathogens described in 9VAC25-31-710 D."	Revise subdivision numbering to clarify requirements. Replace "Sewage sludge" with "Biosolids". Clarify subsection reference. Revise to read: " 3-4. Class B – Alternative 2. Sewage sludge <u>Biosolids</u> that is used or disposed shall be treated in one of the processes to significantly reduce pathogens described in 9VAC25-31-710 D <u>subsection D of this section.</u> "
9VAC25-31-710 B 4	9VAC25-31-710 B 5	"4. Class B – Alternative 3. Sewage sludge that is used or disposed shall be treated	Revise subdivision numbering to clarify requirements. Replace "Sewage sludge" with "Biosolids". Revise to read: "4. Class B

		in a process that is equivalent to a process to significantly reduce pathogens, as determined by the board."	– Alternative 3. Sewage sludge <u>Biosolids</u> that is used or disposed shall be treated in a process that is equivalent to a process to significantly reduce pathogens, as determined by the board."
9VAC25-31-710 B 5	9VAC25-31-710 B 6	"5. Site restrictions."	Revise subdivision numbering to clarify requirements. Revise to read: " 5 - <u>6</u> . Site restrictions."
9VAC25-31-710 B 5 a	9VAC25-31-710 B 6 a	"a. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "a. Food crops with harvested parts that touch the sewage sludge/soil mixture <u>biosolids/soil mixture</u> and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge <u>biosolids</u> ."
9VAC25-31-710 B 5 b	9VAC25-31-710 B 6 b	"b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge <u>biosolids</u> when the sewage sludge <u>biosolids</u> remains on the land surface for four months or longer prior to incorporation into the soil."
9VAC25-31-710 B 5 c	9VAC25-31-710 B 6 c	"c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge <u>biosolids</u> when the sewage sludge <u>biosolids</u> remains on the land surface for less than four months prior to incorporation into the soil."
9VAC25-31-710 B 5 d	9VAC25-31-710 B 6 d	"d. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "d. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge <u>biosolids</u> ."
9VAC25-31-710 B 5 e	9VAC25-31-710 B 6 e	"e. Animals shall not be grazed on the land for 30 days after application of sewage sludge."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "e. Animals shall not be grazed on the land for 30 days after application of sewage sludge <u>biosolids</u> ."
9VAC25-31-710	9VAC25-	"f. Turf grown on land	Revise subdivision numbering to clarify

B 5 f	31-710 B 6 f	where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge..."	requirements. Replace "sewage sludge" with "biosolids". Revise to read: "f. Turf grown on land where sewage sludge <u>biosolids</u> is applied shall not be harvested for one year after application of the sewage sludge <u>biosolids</u> ..."
9VAC25-31-710 B 5 g	9VAC25-31-710 B 6 g	"g. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "g. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge <u>biosolids</u> ."
9VAC25-31-710 B 5 h	9VAC25-31-710 B 6 h	"h. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge."	Revise subdivision numbering to clarify requirements. Replace "sewage sludge" with "biosolids". Revise to read: "h. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge <u>biosolids</u> ."
9VAC25-31-710 C 1	9VAC25-31-710 C	"C. Domestic septage. 1. The site restriction in subdivision 6 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site;"	Subdivision designations deleted and punctuation changed to account for deletion of C 2 – option to lime stabilize septage. The option to lime stabilize septage was stricken in order to avoid additional site restrictions. Land application of lime stabilized septage in prohibited by Virginia statute. Subdivision reference revised to account for renumbering of subdivisions. Revised to read: "C. Domestic septage [- 4-;] The site restriction in subdivision- 5 <u>6</u> of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or "
9VAC25-31-710 C 2		Domestic septage. "2. The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher..."	Subdivision deleted. The option to lime stabilize septage was stricken in order to avoid additional site restrictions. Land application of lime stabilized septage in prohibited by Virginia statute.
	9VAC25-31-720 A		Subsection header added to clarify requirements. New language added: " <u>A</u> . Vector attraction reduction requirements."
9VAC25-31-720 A 1		"A. 1. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge is applied..."	Delete subsection A designation from text. Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: " A -1. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge <u>biosolids</u> is applied..."

9VAC25-31-720 A 2		"2. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge is applied to a lawn or a home garden."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "2. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge <u>biosolids</u> is applied to a lawn or home garden."
9VAC25-31-720 A 3		"3. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge is sold or given away in a bag..."	Correct terminology. Replace "sewage sludge" with "biosolids". Revised to read: "3. One of the vector attraction reduction requirements...shall be met when bulk sewage sludge <u>biosolids</u> is sold or given away in a bag..."
	9VAC25-31-720 B		Subsection header added to clarify requirements. New language added: " <u>B. Vector attraction reduction options:</u> "
9VAC25-31-720 B		"B. 1. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%..."	Delete subsection A designation from text. Revised to read: " B- 1. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%..."
	9VAC25-31-720 B 9		Subdivision header added to clarify requirements. New language added: " <u>9. Sewage sludge injection requirements:</u> "
9VAC25-31-720 B 9 a		"9. a. Sewage sludge shall be injected below the surface of the land."	Delete subdivision 9 designation from text. Revised to read: " 9- a. Sewage sludge shall be injected below the surface of the land."
	9VAC25-31-720 B 10		Subdivision header added to clarify requirements. New language added: " <u>10. Sewage sludge incorporation requirements:</u> "
9VAC25-31-720 B 10 a		"10. a. Sewage sludge applied to the land surface or placed on an active sewage sludge unit..."	Delete subdivision 10 designation from text. Revised to read: " 10- a. Sewage sludge applied to the land surface or placed on an active sewage sludge unit..."
9VAC25-32		The use of the phrase "Operations management plan".	Revised term to biosolids management plan throughout regulation based on comment; confusing with the term operations and maintenance Manual
9VAC25-32		The use of the term "Ground water".	Revised term to groundwater throughout regulation to be consistent with VPDES and in accordance with USGS Office of Groundwater Technical Memorandum dated March 26, 2009
9VAC25-32		The use of the terms Buffer and Buffer zone.	The term buffer was replaced with setback distance and the term buffer zone was replaced with setback area throughout the regulation. Revised to clarify requirements and to avoid confusion with "vegetated buffers".

9VAC25-32-10	9VAC25-32-10 A	"The following words and terms..."	Add subsection designation to clarify. Revised to read: " <u>A.</u> The following words and terms..."
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Active sewage sludge unit</u> " means a sewage sludge unit that has not closed.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Aerobic digestion</u> " means the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Agricultural land</u> " means land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.
9VAC25-32-10	9VAC25-32-10 A		Add definition to relate "agronomic rate" specifically to biosolids: " <u>Agronomic rate</u> " means, in regard to biosolids the whole sludge application rate (dry weight basis) designed: (1) to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land and (ii) to minimize the amount of nitrogen in the biosolids that passes below the root zone of the crop or vegetation grown on the land to the groundwater. Added to clarify requirements and to be consistent with common usage.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Anaerobic digestion</u> " means the biochemical decomposition of organic matter in sewage sludge or biosolids into methane gas and carbon dioxide by microorganisms in the absence of air.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Annual pollutant loading rate</u> " or " <u>APLR</u> " means the maximum amount of a pollutant that can be applied to a unit area of land during a 365-day period.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Annual whole sludge application rate</u> " or " <u>AWSAR</u> " means the maximum amount of biosolids (dry weight basis) that can be applied to a unit area of land during a 365-day period.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Apply biosolids</u> " or " <u>biosolids applied to the land</u> : means land application of biosolids.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Biosolids</u> " means a sewage sludge that has received an established treatment and is managed in a manner to

			<u>meet the required pathogen control and vector attraction reduction, and contains concentrations of regulated pollutants below the ceiling limits established in 40 CFR Part 503 and 9VAC25-32-660, such that it meets the standards established for use of biosolids for land application, marketing, or distribution in accordance with this regulation. Liquid biosolids contains less than 15% dry residue by weight. Dewatered biosolids contains 15% or more dry residue by weight.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Bulk biosolids" means biosolids that are not sold or given away in a bag or other container for application to the land.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Critical areas" and "critical waters" means areas and waters in proximity to shellfish waters, a public water supply, or recreation or other waters where health or water quality concerns are identified by the Department of Health.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Cumulative pollutant loading rate" means the maximum amount of an inorganic pollutant that can be applied to an area of land.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Density of microorganisms" means the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.</u>
9VAC25-32-10	9VAC25-32-10 A	Definition: "Discharge" means, when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean other than discharge from a vessel or other floating craft when being used as a means of transportation.	Definition revised and shortened. Part of definition moved to new definition of "Discharge of a pollutant". Revised to read: "Discharge" means, when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean other than discharge from a vessel or other floating craft when being used as a means of transportation.
9VAC25-32-10	9VAC25-32-10 A		Add definition – originally part of definition of "discharge". Definition reads: <u>"Discharge of a pollutant" means any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean other than discharge from a vessel or other floating craft when being used as a means</u>

			of transportation.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Domestic septage" means either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Domestic sewage" means waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Dry tons" means dry weight established as representative of land applied biosolids and expressed in units of English tons.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Dry weight basis" means calculated on the basis of having been dried at 105°C until reaching a constant mass (i.e., essentially 100% solids content).</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>:"Exceptional quality biosolids" means biosolids that have received an established level of treatment for pathogen control and vector attraction reduction and contain known levels of pollutants, such that they may be marketed or distributed for public use in accordance with this regulation.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Facilities" means, in regard to biosolids, processes, equipment, storage devices and dedicated sites, located or operated separately from a treatment works, utilized for sewage sludge management including, but not limited to, handling, treatment, transport, and storage of biosolids.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Feed crops" means crops produced primarily for consumption by animals.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Fiber crops" means crops produced primarily for the manufacture of textiles, such as flax and cotton.</u>
9VAC25-32-10	9VAC25-		Add definition: <u>"Field" means an area of</u>

	32-10 A		<u>land within a site where land application is proposed or permitted.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Food crops" means crops produced primarily for consumption by humans. These include, but are not limited to, fruits, vegetables, and tobacco.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Forest" means a tract of land thick with trees and underbrush.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Generator" means the owner of a sewage treatment works that produces sewage sludge and biosolids.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Groundwater" means water below the land surface in the saturated zone.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Industrial wastes" means liquid or other wastes resulting from any process of industry, manufacture, trade, or business, or from the development of any natural resources.</u>
9VAC25-32-10		Definitions. "Land application" means the introduction of wastewaters or sludge into or onto the ground for treatment or reuse.	Revised definition to read: <u>"Land application" means, in regard to biosolids, the introduction of wastewaters or sludge into or onto the ground for treatment or reuse distribution of either treated wastewater, referred to as "effluent", or stabilized sewage sludge, referred to as "biosolids", by spreading or spraying on the surface of the land, injecting below the surface of the land, or incorporating into the soil with a uniform application rate for the purpose of fertilizing the crops and vegetation or conditioning the soil. Sites approved for land application of biosolids in accordance with this regulation are not considered to be treatment works. Bulk disposal of stabilized sludge in a confined area, such as in landfills, is not land application. For the purpose of this regulation, the use of biosolids in agricultural research and the distribution and marketing of exceptional quality biosolids are not land application.</u> Revised to clarify requirements.
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Land application area" means, in regard to biosolids, the area in the permitted field, excluding the setback areas, where biosolids may be applied.</u> Based on comments received.
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Land applier" means someone who land applies</u>

			<u>biosolids pursuant to a valid permit from the department as set forth in this regulation.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Land with a high potential for public exposure" means land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Land with a low potential for public exposure" means land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Liner" means soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Local monitor" means a person or persons employed by a local government to perform the duties of monitoring the operations of land appliers pursuant to a local ordinance.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Local ordinance" means an ordinance adopted by a local government to perform the duties of monitoring the operations of land appliers pursuant to a local ordinance.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Malodor" means an unusually strong or offensive odor associated with biosolids or sewage sludge as distinguished from odors commonly associated with biosolids or sewage sludge.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions.	Added new definition: <u>"Monthly average" means the arithmetic mean of all measurements taken during the month.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions. "Municipality" means a city, county, town, district association, authority or other public body created under the law and having jurisdiction over disposal of sewage, industrial, or other wastes.	Revise to clarify. Revised to read: <u>"Municipality" means a city, county, town, district association, authority or other public body created under the law and having jurisdiction over disposal of sewage, industrial, or other wastes, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under state law; an Indian tribe or an authorized Indian tribal</u>

			<p><u>organization having jurisdiction over sewage sludge or biosolids management; or a designated and approved management agency under § 208 of the federal Clean Water Act, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity; or an integrated waste management facility as defined in § 201 (e) of the federal Clean Water Act, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge or biosolids.</u></p>
9VAC25-32-10	9VAC25-32-10 A		<p>Add definition: <u>"Odor sensitive receptor" means in the context of land application of biosolids, any health care facility, such as hospitals, convalescent house, etc. or a building or outdoor facility regularly used to host or serve large groups of people such as schools, dormitories, athletic and other recreational facilities.</u></p>
9VAC25-32-10	9VAC25-32-10 A		<p>Add definition: <u>"Operate" means the act of any person who may have an impact on either the finished water quality at a waterworks or the final effluent at a sewage treatment works, such as to (i) place into or take out of service a unit process or unit processes, (ii) make or cause adjustments in the operation of a unit process or unit processes at a treatment works, or (iii) manage sewage sludge or biosolids.</u></p>
9VAC25-32-10	9VAC25-32-10 A		<p>Add definition: <u>"Other container" means either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.</u></p>
9VAC25-32-10	9VAC25-32-10 A		<p>Add definition: <u>"Owner" means the Commonwealth or any of its political subdivisions including sanitary districts, sanitation district commissions and authorities; federal agencies; any individual; any group of individuals acting individually or as a group; or any public or private institution, corporation, company, partnership, firm, or association that owns or proposes to own a sewerage system or treatment works as defined in § 62.1-44.3</u></p>

			of the Code of Virginia.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Pasture" means land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Pathogenic organisms" means disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions: "Permittee" means an owner or operator who has a currently effective VPA permit issued by the board.	Revise to add reference to the "department". Revised to read: "Permittee" means an owner or operator who has a currently effective VPA permit issued by the board or the department.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Person who prepares biosolids" means either the person who generates biosolids during the treatment of domestic sewage in a treatment works or the person who derives the material from sewage sludge.</u> Added to be consistent with use in the regulation, based on comment.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"pH" means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25°C or measured at another temperature and then converted to an equivalent value at 25°C.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Place sewage sludge" or sewage sludge placed" means disposal of sewage sludge on a surface disposal site.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions: "Pollutant" means any substance, radioactive materials, or heat which causes or contributes to, or may cause or contribute to, pollution..."	Revise to clarify. Revised to read: "Pollutant" means, <u>in regard to wastewater,</u> any substance, radioactive materials, or heat which causes or contributes to, or may cause or contribute to, pollution..."
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Pollutant" means, in regard to sewage sludge or biosolids, an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism wither directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the board, cause</u>

			<u>death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Pollutant limit" means a numerical value that describes the amount of a pollutant allowed per unit amount of biosolids (e.g., milligrams per kilogram of total solids), the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare), or the volume of a material that can be applied to a unit area of land (e.g., gallons per acre).</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Pollution" means such alteration of the physical, chemical, or biological properties of any state waters or soil as will, or is likely to, create a nuisance or render such waters or soil: (i) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish or aquatic life; (ii) unsuitable despite reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses. Such alteration is also deemed to be pollution, if there occurs: (a) an alteration of the physical, chemical, or biological property of state waters or soil by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration or, or discharge, or deposit, to state waters or soil by other owners, is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters or soil; or (c) the contravention of standards of air or water quality duly established by the board.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Primary sludge" means sewage sludge removed from primary settling tanks that is readily thickened by gravity thickeners.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Process" means a system, or an arrangement of equipment or other devices that remove from waste materials pollutants including, but not limited to, a treatment works or portions thereof.</u>

9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Public contact site" means land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, and golf courses.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Reclamation site" means drastically disturbed land that is reclaimed using biosolids. This includes, but is not limited to, strip mines and construction sites.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Reimbursement application" means forms approved by the department to be used to apply for reimbursement of local monitoring costs for land application of biosolids in accordance with a local ordinance.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Run-off" means rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Setback area" means the area of land between the boundary of the land application area and adjacent features where biosolids or other managed pollutants may not be land applied.</u> Added to clarify terminology in the regulation.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Sewage" means the water-carried and nonwater-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes, separately or together with such underground, surface, storm, and other water and liquid wastes as may be present from residences, buildings, vehicles, industrial establishments, or other places.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Sewage sludge" means any solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.</u> Revised definition to

			be consistent with the use of the term throughout the regulations.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Sewage sludge unit</u> " means land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include surface waters.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Site</u> " means the area of land within a defined boundary where an activity is proposed or permitted.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Sludge management</u> " means the treatment, handling, transportation, storage, use, distribution, or disposal of sewage sludge.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Specific oxygen uptake rate</u> " or " <u>SOUR</u> " means the mass of oxygen consumed per unit time per mass of total solids (dry weight basis) in the sewage sludge.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>State waters</u> " means all water on the surface or under the ground wholly or partially within or bordering the state or within its jurisdiction.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Store sewage sludge</u> " or " <u>storage of sewage sludge</u> " means the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Substantial compliance</u> " means designs and practices that do not exactly conform to the standards set forth in this chapter as contained in documents submitted pursuant to 9VAC25-32-340, but whose construction or implementation will not substantially affect health considerations or performance.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Supernatant</u> " is a liquid obtained from separation of suspended matter during sludge treatment or storage.
9VAC25-32-10	9VAC25-32-10 A		Add definition: " <u>Surface disposal site</u> " means an area of land that contains one or more active sewage sludge units.
9VAC25-32-10	9VAC25-32-10 A	Definition: "Surface water" means... (4) All impoundments of waters otherwise defined as surface waters under this	Revise definition: "Surface water" means... (4) All impoundments of waters otherwise defined as surface waters <u>of the United States</u> under this definition...

		definition...	
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Total solids" means the materials in sewage sludge that remain as residue when the sewage sludge is dried to 103°C to 105°C.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions: "Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307 (a) of the Clean Water Act (33 USC § 1317 (a)) which after discharge will, on the basis of available information, cause toxicity.	Revised definition to read: "Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307 (a) of the Clean Water Act (33 USC § 1317 (a)) which after discharge will, on the basis of available information, cause toxicity <u>pollutant listed as toxic under section 307 (a)(1) or in the case of :sludge use or disposal practices" any pollutant identified in regulations implementing section 405 (d) of the CWA. Revised to clarify and to correct citation.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Treat sewage sludge" or "treatment of sewage sludge" means the preparation of sewage sludge for final use or disposal. This includes, but is m=not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include the storage of sewage sludge.</u>
9VAC25-32-10	9VAC25-32-10 A	Definitions: "Treatment works" means any devices and systems used for the storage, treatment, recycling or reclamation of sewage or liquid industrial waste, or other waste or necessary to recycle or reuse water, including intercepting sewers, outfall sewers, sewage collection systems, individual systems, pumping, power and other equipment and their appurtenances; extensions, improvements, remodeling, additions, or alterations; and any works, including land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; or any other method or system used for preventing,	Revise definition to read: "Treatment works" means any devices and systems used for the storage, treatment, recycling or reclamation of sewage or liquid industrial waste, or other waste or necessary to recycle or reuse water, including intercepting sewers, outfall sewers, sewage collection systems, individual systems, pumping, power and other equipment and their appurtenances; extensions, improvements, remodeling, additions, or alterations; and any works, including land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; or any other method or system used for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined sewer water and sanitary sewer systems. <u>Either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a</u>

		abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined sewer water and sanitary sewer systems.	<u>liquid nature. Treatment works may include but are not limited to pumping, power, and other equipment and their appurtenances; septic tanks; and any works, including land, that are or will be (i) an integral part of the treatment process or (ii) used for ultimate disposal of residues or effluents resulting from such treatment. "Treatment works" does not include biosolids use on privately owned agricultural land.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Unstabilized solids" means organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Use" means to manage or recycle a processed waste product in a manner so as to derive a measurable benefit as a result of such management.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Variance" means a conditional approval based on a waiver of specific regulations to a specific owner relative to a specific situation under documented conditions for a specified period of time.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Vector attraction" means the characteristic of biosolids or sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.</u> Added to be consistent with VPDES. Based on comments received.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Vegetated buffer" means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.</u> Added to clarify changes to buffers and buffer language in the regulation.
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Volatile solids" means the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550°C in the presence of excess air.</u>
9VAC25-32-10	9VAC25-32-10 A		Add definition: <u>"Water quality standards" means the narrative statements for general requirements and numeric limits for specific requirements that describe the water</u>

			<u>quality necessary to meet and maintain reasonable and beneficial uses. Such standards are established by the board under § 62.1-44.15 (3a) of the Code of Virginia.</u>
	9VAC25-32-10 B		Add new section to address meanings of generally used technical terms not defined in subsection A of this section. New language: <u>B. Generally used technical terms not defined in subsection A of this section or the department's latest definitions of technical terms as used to implement § 62.1-44.15 of the Code of Virginia shall be defined in accordance with "Glossary-Water and Wastewater Control Engineering" published by the American Public Health Association (APHA), American Society of Civil Engineers (ASCE), American Water Works Association (AWWA), and the Water Environment Federation (WEF).</u>
9VAC25-32-30 B 1	9VAC25-32-30 B	"B. 1. Except in compliance with a VPA permit, or another permit issued by the board, it shall be unlawful for any person to:"	Renumber to clarify: Revised to read: "B. 4. Except in compliance with a VPA permit, or another permit issued by the board, it shall be unlawful for any person to:"
9VAC25-32-30 B 1 a	9VAC25-32-30 B 1	"a. Discharge into, or adjacent to, state waters..."	Renumber to clarify: Revised to read: " <u>a-1.</u> Discharge into, or adjacent to, state waters..."
9VAC25-32-30 B 1 b	9VAC25-32-30 B 2	"b. Otherwise alter the physical, chemical or biological properties of such state waters..."	Renumber to clarify: Revised to read: " <u>b-2.</u> Otherwise alter the physical, chemical or biological properties of such state waters..."
9VAC25-32-30 B 2	9VAC25-32-30 C	"2. Any person required to obtain a permit pursuant to this chapter...in violation of subdivision B 1 of this section; or who discharges or causes...in violation of subdivision B 1 of this section shall notify the department..."	Subsection numbering revised to clarify requirements. Subdivisions references changed from B 1 to B to reflect subsection renumbering. Revised to read: " <u>2-C.</u> Any person required to obtain a permit pursuant to this chapter...in violation of <u>subdivision subsection B 4</u> -of this section; or who discharges or causes...in violation of <u>subdivision-subsection B 4</u> -of this section shall notify the department..."
9VAC25-32-30 B 2 a	9VAC25-32-30 C 1	"a. The written report shall contain:"	Renumber to clarify: Revised to read: " <u>a-1.</u> The written report shall contain:"
9VAC25-32-30 B 2 a (1)	9VAC25-32-30 C 1 a	"(1) A description of the nature of the discharge;"	Renumber to clarify: Revised to read: " <u>{1}</u> <u>a.</u> A description of the nature of the discharge;"
9VAC25-32-30 B 2 a (2)	9VAC25-32-30 C 1	"(2) The cause of the discharge;"	Renumber to clarify: Revised to read: " <u>{2}</u> <u>b.</u> The cause of the discharge;"

	b		
9VAC25-32-30 B 2 a (3)	9VAC25-32-30 C 1 c	"(3) The date on which the discharge occurred;"	Renumber to clarify: Revised to read: " (3) <u>c.</u> The date on which the discharge occurred;"
9VAC25-32-30 B 2 a (4)	9VAC25-32-30 C 1 d	"(4) The length of time that the discharge continued;"	Renumber to clarify: Revised to read: " (4) <u>d.</u> The length of time that the discharge continued;"
9VAC25-32-30 B 2 a (5)	9VAC25-32-30 C 1 e	"(5) The volume of the discharge;"	Renumber to clarify: Revised to read: " (5) <u>e.</u> The volume of the discharge;"
9VAC25-32-30 B 2 a (6)	9VAC25-32-30 C 1 f	"(6) If the discharge is continuing, how long it is expected to continue;"	Renumber to clarify: Revised to read: " (6) <u>f.</u> If the discharge is continuing, how long it is expected to continue;"
9VAC25-32-30 B 2 a (7)	9VAC25-32-30 C 1 g	"(7) If the discharge is continuing, what the expected total volume of the discharge will be; and"	Renumber to clarify: Revised to read: " (7) <u>g.</u> If the discharge is continuing, what the expected total volume of the discharge will be; and"
9VAC25-32-30 B 2 a (8)	9VAC25-32-30 C 1 h	"(8) Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by the permit."	Renumber to clarify: Revised to read: " (8) <u>h.</u> Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by the permit."
9VAC25-32-30 B 2 b	9VAC25-32-30 C 2	"b. Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement."	Renumber to clarify: Revised to read: " b. <u>2.</u> Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement."
9VAC25-32-20 C	9VAC25-32-30 D	"C. VPA permits may be utilized to authorize pollutant management activities including, but not limited to, animal feeding operations, storage or land application of sewage, sludge, industrial waste or other waste; or the complete reuse or recycle of wastewater. Point source discharges of pollutants to surface waters may be authorized by a VPDES permit (See 9VAC25-31-10 et seq., VPDES Permit Regulation)."	Renumbered to account for renumbering of subsections. Added the term "biosolids". Corrected regulation reference. Revised to read: " C. <u>D.</u> VPA permits may be utilized to authorize pollutant management activities including, but not limited to, animal feeding operations, storage or land application of sewage, sludge, <u>biosolids</u> , industrial waste or other waste; or the complete reuse or recycle of wastewater. Point source discharges of pollutants to surface waters may be authorized by a VPDES permit (See 9VAC25-31-10 et seq. <u>9VAC25-31</u> , VPDES Permit Regulation)."
9VAC25-32-20 D	9VAC25-32-30 E	"D. No VPA permit shall be issued in the following circumstances:"	Renumbered to account for renumbering of subsections. Revised to read: " D. <u>E.</u> No VPA permit shall be issued in the following circumstances:"

9VAC25-32-40 4		Exclusions. "4. Land disposal activity, including sewage sludge use or disposal or onsite waste treatment, when this activity is otherwise authorized by the Department of Environmental Quality; and"	Subdivision revised: "4. Land disposal activity, including <u>biosolids use or sewage sludge use or disposal</u> or onsite waste treatment, when this activity is otherwise authorized by the Department of Environmental Quality <u>department</u> ; and" Revised to account for the addition of a new exclusion and use of the term "department". Revised to include the term "biosolids use".
	9VAC25-32-40 5	Exclusions.	Added a new exclusion: " <u>5. Land disposal activity, including onsite waste treatment, when this activity is authorized by a Virginia Department of Health permit; and</u>
9VAC25-32-40 5	9VAC25-32-40 6	"5. Discharges authorized by EPA under the Safe Drinking Water Act Underground Injection Control Program (UIC), 40 CFR Part 144, and approved, in writing, by the board."	Subdivision numbering revised to account for insertion of new item "5" language: " <u>6. Discharge authorized by EPA under the Safe Drinking Water Act Underground Injection Control Program (UIC), 40 CFR Part 144, and approved, in writing, by the board.</u> " Subdivision numbering revised to account for the addition of a new exclusion.
9VAC25-32-60 A 1 a		"1. a. A complete VPA permit application shall be submitted..."	Delete subdivision. Requirement moved to another section of the regulations to clarify requirements.
9VAC25-32-60 A 1 b		"b. The board may require the submission of additional information..."	Delete subdivision. Requirement moved to another section of the regulations to clarify requirements.
9VAC25-32-60 A 1 c		"c. In accordance with § 62.1-44.19:3 of the Code of Virginia, no application for a permit or a variance to authorize the storage of sewage sludge shall be complete unless..."	Delete subdivision. Requirement moved to another section of the regulations to clarify requirements.
9VAC25-32-60 A 1 d		"d. No application for a permit to land apply biosolids in accordance with Part IX (9VAC25-32-310 et seq.) of this chapter shall be complete unless..."	Delete subdivision. Requirement moved to another section of the regulations to clarify requirements.
	9VAC25-32-60 B		Add subsection header to clarify requirements. New language: " <u>B. Time to apply.</u>
9VAC25-32-60 A 2 a	9VAC25-32-60 B 1	"2. a. Any owner proposing a new pollutant management activity shall submit an application..."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " <u>2-a-1.</u> Any owner proposing a new pollutant management activity shall submit an application..."

9VAC25-32-60 A 2 b	9VAC25-32-60 B 2	"b. Any owner with an existing pollutant management activity that has not been permitted..."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " b-2. Any owner with an existing pollutant management activity that has not been permitted..."
9VAC25-32-60 A 2 c	9VAC25-32-60 B 3	"c. Owners currently managing pollutants who have effective VPA permits shall submit a new application..."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " e-3. Owners currently managing pollutants who have effective VPA permits shall submit a new application..."
9VAC25-32-60 A 2 c (1)	9VAC25-32-60 B 3 a	"(1) Result in significantly increased amounts of pollutants being managed..."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " (4)-a. Result in significantly increased amounts of pollutants being managed..."
9VAC25-32-60 A 2 c (2)	9VAC25-32-60 B 3 b	"(2) Violate or lead to violation of the terms and conditions of the effective VPA permit."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " (2)-b. Violate or lead to violation of the terms and conditions of the effective VPA permit."
9VAC25-32-60 A 3		"3. Pursuant to § 62.1-44.15:3 of the Code of Virginia, no application for a VPA permit from a privately owned treatment works...shall be considered complete..."	Delete subdivision. Requirement moved to another section of the regulations to clarify requirements.
9VAC25-32-60 B	9VAC25-32-60 C	"B. Duty to reapply. Any permittee with an effective VPA permit shall submit..."	Subdivision renumbered to account for addition of new subsection header. Revised to read: " B-C. Duty to reapply. Any permittee with an effective VPA permit shall submit..."
	9VAC25-32-60 D		Add new subsection to clarify the requirements for a completeness determination. New language: " <u>D. Completeness.</u> "
	9VAC25-32-60 D 1		Add new subdivision to specify completeness requirements. Originally included as 9VAC25-32-60 A 1 a. New language: " <u>1. A complete VPA permit application shall be submitted by the owner of the pollutant management activity before a VPA permit can be issued. The permit application may be submitted as a hard copy or electronically with a hard copy signature page. This item does not apply where general VPA permits are applicable.</u> "
	9VAC25-		Add new subdivision to specify

	32-60 D 2		<p>completeness requirements. Originally included as 9VAC25-32-60 A 1 b. New language: "<u>2. The board may require the submission of additional information after an application has been filed, and may suspend the processing of any application until such time as the owner has supplied missing or deficient information and the board considers the application complete. Further, when the owner becomes aware that he omitted one or more relevant facts from a VPA permit application, or submitted incorrect information in a VPA permit application or in any report to the department, he shall promptly submit such facts or the correct information.</u>"</p>
	9VAC25-32-60 D 3		<p>Add new subdivision to specify completeness requirements. Originally included as 9VAC25-32-60 A 1 c. New language: "<u>3. In accordance with § 62.1-44.19:3 of the Code of Virginia, no application for a permit or variance to authorize the storage of biosolids shall be complete unless it contains certification from the governing body of the locality in which the biosolids is to be stored that the storage site is consistent with all applicable ordinances. The governing body shall confirm or deny consistency within 30 days or receiving a request for certification. If the governing body does not so respond, the site shall be deemed consistent.</u>"</p>
	9VAC25-32-60 D 4		<p>Add new subdivision to specify completeness requirements. Originally included as 9VAC25-32-60 A 1 d. New language: "<u>4. No application for a permit to land apply biosolids in accordance with Part IX (9VAC25-32-303 et seq.) of this chapter shall be complete unless it includes the written consent of the landowner to apply biosolids on his property.</u></p>
	9VAC25-32-60 D 5		<p>Add new subdivision to specify completeness requirements. Originally included as 9VAC25-32-60 A 3. New language: "<u>5. Pursuant to § 62.1-44.15:3 of the Code of Virginia, no application for a VPA permit from a privately owned treatment works serving, or designed to serve, 50 or more residences shall be</u></p>

			<u>considered complete unless the applicant has provided the department with notification from the State Corporation Commission that the applicant is incorporated in the Commonwealth and is in compliance with all regulations and relevant orders of the State Corporation Commission."</u>
9VAC25-32-60 C	9VAC25-32-60 E	"C. Information requirements. All applicants for VPA permits shall provide information in accordance with forms provided by the department."	Subdivision renumbered to account for addition of new subsection headers. Added language to clarify that all applicants for VPA permits shall provide information on the most current applications forms provided by the "board" based on concerns of the SWCB Revised to read: " <u>C. E. Information requirements. All applicants for VPA permits shall provide information in accordance with to the department using the most current application forms provided by the department board.</u> "
	9VAC25-32-60 F		Add new subsection to clarify the general information requirements for an application for the authorization to land apply biosolids. New language: " <u>F. Application for the authorization to land apply biosolids. All persons applying to land apply biosolids must provide the information in this subsection to the department using an application form approved by the department. New applicants must submit all information available at the time of permit application. The information may be provided by referencing information previously submitted to the department. The board may waive any requirement of this subsection if it has access to substantially identical information. The board may also waive any requirement of this subsection that is not of material concern for a specific permit.</u> "
	9VAC25-32-60 F 1		Add new subdivision to clarify general information requirements. New language: " <u>1. General information.</u> "
	9VAC25-32-60 F 1 a		Add new subdivision to clarify general information requirements. New language: " <u>a. Legal name and address.</u> "
	9VAC25-32-60 F 1		Add new subdivision to clarify general information requirements. New language:

	b		"b. Owner contact information, including:"
	9VAC25-32-60 F 1 b (1)		Add new subdivision to clarify general information requirements. New language: " <u>(1) name;</u> "
	9VAC25-32-60 F 1 b (2)		Add new subdivision to clarify general information requirements. New language: " <u>(2) mailing address;</u> "
	9VAC25-32-60 F 1 b (3)		Add new subdivision to clarify general information requirements. New language: " <u>(3) telephone number; and</u> "
	9VAC25-32-60 F 1 b (4)		Add new subdivision to clarify general information requirements. New language: " <u>(4) email address.</u> "
	9VAC25-32-60 F 1 c		Add new subdivision to clarify general information requirements. New language: " <u>c. A general description of the proposed activity including;</u> "
	9VAC25-32-60 F 1 c (1)		Add new subdivision to clarify general information requirements. New language: " <u>(1) Name and location of generators involved and their owners;</u> "
	9VAC25-32-60 F 1 c (2)		Add new subdivision to clarify general information requirements. New language: " <u>(2) Biosolids quality and the generator's biosolids treatment and handling processes;</u> "
	9VAC25-32-60 F 1 c (3)		Add new subdivision to clarify general information requirements. New language: " <u>(3) Generator's odor control plan, that contains at minimum;</u> "
	9VAC25-32-60 F 1 c (3) (a)		Add new subdivision to clarify general information requirements. New language: " <u>(a) Methods used to minimize odor in producing biosolids;</u> "
	9VAC25-32-60 F 1 c (3) (b)		Add new subdivision to clarify general information requirements. New language: " <u>(b) Methods used to identify malodorous biosolids before land application (at the generating facility);</u> "
	9VAC25-32-60 F 1 c (3) (c)		Add new subdivision to clarify general information requirements. New language: " <u>(c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and</u> "
	9VAC25-32-60 F 1 c (3) (d)		Add new subdivision to clarify general information requirements. New language: " <u>(d) Methods used to abate malodor from biosolids if land applied;</u> "
	9VAC25-32-60 F 1		Add new subdivision to clarify general information requirements. New language:

	c (4)		<u>"(4) Means of biosolids transport or conveyance."</u>
	9VAC25-32-60 F 1 c (5)		Add new subdivision to clarify general information requirements. New language: <u>"(5) Location and volume of storage proposed;"</u>
	9VAC25-32-60 F 1 c (6)		Add new subdivision to clarify general information requirements. New language: <u>"(6) A description of field staging methods;"</u>
	9VAC25-32-60 F 1 c (7)		Add new subdivision to clarify general information requirements. New language: <u>"(7) General location of sites proposed for application, and"</u>
	9VAC25-32-60 F 1 c (8)		Add new subdivision to clarify general information requirements. New language: <u>"(8) Methods of biosolids application proposed."</u>
	9VAC25-32-60 F 1 d		Add new subdivision to clarify general information requirements. New language: <u>"d. Written permission of landowners on the most current form approved by the board and pertinent lease agreements as may be necessary for operation of the treatment works."</u>
	9VAC25-32-60 F 1 e		Add new subdivision to clarify general information requirements. New language: <u>"e. Methods for notification of local government and obtaining compliance with local government zoning and applicable ordinances."</u>
	9VAC25-32-60 F 1 f		Add new subdivision to clarify general information requirements. New language: <u>"f. A copy of a letter of approval of the nutrient management plan for the operation from the Department of Conservation and Recreation if required in subdivisions 3 b of this section."</u>
	9VAC25-32-60 F 2		Add subsection to address design information requirements. New language: <u>"2. Design information."</u>
	9VAC25-32-60 F 2 a		Add to specify that biosolids characterization is to be included as part of the required design information. New language: <u>"a. Biosolids characterization. For each source of biosolids that the applicant proposed to land apply, the applicant must submit biosolids monitoring data for the pollutants for which limits in biosolids have been established in Part IX (9VAC25-32-303 et seq.) of this chapter."</u>

			<u>for the applicant's use or disposal practices on the date of permit application with the following conditions:"</u>
	9VAC25-32-60 F 2 a (1)		Add to specify conditions. New language: <u>"(1) When applying for authorization to land apply a biosolids source not previously included in a VPDES or VPA Permit, the biosolids shall be sampled and analyzed for PCBs. The sample results shall be submitted with the permit application or request to add the source;"</u>
	9VAC25-32-60 F 2 a (2)		Add to specify conditions. New language: <u>"(2) The board may require sampling for additional pollutants, as appropriate, on a case-by-case basis;"</u>
	9VAC25-32-60 F 2 a (3)		Add to specify conditions. New language: <u>"(3) Applicants must provide:"</u>
	9VAC25-32-60 F 2 a (3) (a)		Add to specify conditions. New language: <u>"(a) Biosolids analytical data from a minimum of three samples taken within four and one-half years prior to the date of the permit application. Samples must be representative of the biosolids and should be taken at least one month apart. Existing data may be used in lieu of sampling done solely for the purpose of this application. The department may reduce the number of samples collected based on site specific conditions."</u>
	9VAC25-32-60 F 2 a (3) (b)		Add to specify conditions. New language: <u>"(b) The total dry tons per 365-day period of biosolids subject to this subsection that is applied to the land; and"</u>
	9VAC25-32-60 F 2 a (3) (c)		Add to specify conditions. New language: <u>"(c) A statement that the biosolids is nonhazardous; a documentation statement for treatment and quality; and a description of how treated biosolids meets other standards in accordance with this regulation."</u>
	9VAC25-32-60 F 2 a (4)		Add to specify conditions. New language: <u>"(4) Samples shall be collected and analyzed in accordance with analytical methods specified in 40 CFR Part 503 (March 26, 2007) and 40 CFR Part 136 (March 26, 2007); and"</u>
	9VAC25-32-60 F 2 a (5)		Add to specify conditions. New language: <u>"(5) The monitoring data provided must include at least the following information for</u>

			each parameter:"
	9VAC25-32-60 F 2 a (5) (a)		Add to specify conditions. New language: " <u>(a) Average monthly concentration for all samples (mg/kg dry weight), based upon actual sample values;</u> "
	9VAC25-32-60 F 2 a (5) (b)		Add to specify conditions. New language: " <u>(b) Analytical method used; and</u> "
	9VAC25-32-60 F 2 a (5) (c)		Add to specify conditions. New language: " <u>(c) Method detection level.</u> "
	9VAC25-32-60 F 2 b		Add to specify conditions. New language: " <u>b. Storage facilities. Plans and specifications for storage facilities for all biosolids to be handled, including routine and on-site storage, shall be submitted for the issuance of a certificate to construct and a certificate to operate in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790) and shall depict the following information:</u> "
	9VAC25-32-60 F 2 b (1)		Add to specify information requirements. New language: " <u>(1) Site layout on a recent 7.5 minute topographic quadrangle or other appropriate scaled map;</u> "
	9VAC25-32-60 F 2 b (2)		Add to specify information requirements. New language: " <u>(2) Location of any required soil, geologic, and hydrologic test holes or borings;</u> "
	9VAC25-32-60 F 2 b (3)		Add to specify information requirements. New language: " <u>(3) Location of the following field features within 0.25 miles of the site boundary (indicate on map) with the approximate distance from the site boundary;</u> "
	9VAC25-32-60 F 2 b (3) (a)		Add to clarify requirements. New language: " <u>(a) Water wells (operating or abandoned);</u> "
	9VAC25-32-60 F 2 b (3) (b)		Add to clarify requirements. New language: " <u>(b) Surface waters;</u> "
	9VAC25-32-60 F 2 b (3) (c)		Add to clarify requirements. New language: " <u>(c) Springs;</u> "
	9VAC25-32-60 F 2 b (3) (d)		Add to clarify requirements. New language: " <u>(d) Public water supplies;</u> "
	9VAC25-32-60 F 2 b (3) (e)		Add to clarify requirements. New language: " <u>(e) Sinkholes;</u> "

	9VAC25-32-60 F 2 b (3) (f)		Add to clarify requirements. New language: " <u>(f) Underground and surface mines;</u> "
	9VAC25-32-60 F 2 b (3) (g)		Add to clarify requirements. New language: " <u>(g) Mine pool (or other) surface water discharge points;</u> "
	9VAC25-32-60 F 2 b (3) (h)		Add to clarify requirements. New language: " <u>(h) Mining spoil piles and mine dumps;</u> "
	9VAC25-32-60 F 2 b (3) (i)		Add to clarify requirements. New language: " <u>(i) Quarries;</u> "
	9VAC25-32-60 F 2 b (3) (j)		Add to clarify requirements. New language: " <u>(j) Sand and gravel pits;</u> "
	9VAC25-32-60 F 2 b (3) (k)		Add to clarify requirements. New language: " <u>(k) Gas and oil wells;</u> "
	9VAC25-32-60 F 2 b (3) (l)		Add to clarify requirements. New language: " <u>(l) Diversion ditches;</u> "
	9VAC25-32-60 F 2 b (3) (m)		Add to clarify requirements. New language: " <u>(m) Occupied dwellings, including industrial and commercial establishments;</u> "
	9VAC25-32-60 F 2 b (3) (n)		Add to clarify requirements. New language: " <u>(n) Landfills and dumps;</u> "
	9VAC25-32-60 F 2 b (3) (o)		Add to clarify requirements. New language: " <u>(o) Other unlined impoundments;</u> "
	9VAC25-32-60 F 2 b (3) (p)		Add to clarify requirements. New language: " <u>(p) Septic tanks and drainfields; and</u> "
	9VAC25-32-60 F 2 b (3) (q)		Add to clarify requirements. New language: " <u>(q) Injection wells.</u> "
	9VAC25-32-60 F 2 b (4)		Add to clarify requirements. New language: " <u>(4) Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:</u> "
	9VAC25-32-60 F 2 b (4) (a)		Add to clarify requirements. New language: " <u>(a) Maximum and minimum percent slopes;</u> "
	9VAC25-32-60 F 2 b (4) (b)		Add to clarify requirements. New language: " <u>(b) Depressions on the site that may collect water;</u> "
	9VAC25-32-60 F 2 b (4) (c)		Add to clarify requirements. New language: " <u>(c) Drainage ways that may attribute to rainfall run-on to or runoff from the site; and</u> "

	9VAC25-32-60 F 2 b (4) (d)		Add to clarify requirements. New language: " <u>(d) Portions of the site (if any) that are located within the 100-year floodplain;</u> "
	9VAC25-32-60 F 2 b (5)		Add to clarify requirements. New language: " <u>(5) Data and specification for the liner proposed for seepage control;</u> "
	9VAC25-32-60 F 2 b (6)		Add to clarify requirements. New language: " <u>(6) Scaled plan view and cross-sectional view of the facilities showing inside and outside slopes of all embankments and details of all appurtenances;</u> "
	9VAC25-32-60 F 2 b (7)		Add to clarify requirements. New language: " <u>(7) Calculations justifying impoundment capacity; and</u> "
	9VAC25-32-60 F 2 b (8)		Add to clarify requirements. New language: " <u>(8) Groundwater monitoring plans for facilities if required by the department. The groundwater monitoring plan shall include pertinent geohydrological data to justify upgradient and downgradient well location and depth.</u> "
	9VAC25-32-60 F 2 c		Add to clarify requirements. New language: " <u>c. Staging. Generic plans for staging of biosolids.</u> "
	9VAC25-32-60 F 2 d		Add to clarify requirements. New language: " <u>d. Land application sites:</u> "
	9VAC25-32-60 F 2 d (1)		Add to clarify requirements. New language: " <u>(1) DEQ control number, if previously assigned, identifying each land application field. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location;</u> "
	9VAC25-32-60 F 2 d (2)		Add to clarify requirements. New language: " <u>(2) The site's latitude and longitude in decimal degrees to three decimal places and the method of determination;</u> "
	9VAC25-32-60 F 2 d (3)		Add to clarify requirements. New language: " <u>(3) A legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:</u> "
	9VAC25-32-60 F 2 d (3) (a)		Add to clarify requirements. New language: " <u>(a) Property boundaries;</u> "
	9VAC25-32-60 F 2 d (3) (b)		Add to clarify requirements. New language: " <u>(b) Surface water courses;</u> "
	9VAC25-		Add to clarify requirements. New language:

	32-60 F 2 d (3) (c)		"(c) <u>Water supply wells and springs</u> ;"
	9VAC25- 32-60 F 2 d (3) (d)		Add to clarify requirements. New language: " <u>(d) Roadways</u> ;"
	9VAC25- 32-60 F 2 d (3) (e)		Add to clarify requirements. New language: " <u>(e) Rock outcrops</u> ;"
	9VAC25- 32-60 F 2 d (3) (f)		Add to clarify requirements. New language: " <u>(f) Slopes</u> ;"
	9VAC25- 32-60 F 2 d (3) (g)		Add to clarify requirements. New language: " <u>(g) Frequently flooded areas (National Resources Conservation Service (NRCS) designation)</u> ;"
	9VAC25- 32-60 F 2 d (3) (h)		Add to clarify requirements. New language: " <u>(h) Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances</u> ;"
	9VAC25- 32-60 F 2 d (3) (i)		Add to clarify requirements. New language: " <u>(i) Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and</u> "
	9VAC25- 32-60 F 2 d (3) (j)		Add to clarify requirements. New language: " <u>(j) The gross acreage of the fields where biosolids will be applied</u> ;"
	9VAC25- 32-60 F 2 d (4)		Add to clarify requirements. New language: " <u>(4) County map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant</u> ;"
	9VAC25- 32-60 F 2 d (5)		Add to clarify requirements. New language: " <u>(5) County tax maps labeled with Tax Parcel ID(s) for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries</u> ;"
	9VAC25- 32-60 F 2 d (6)		Add to clarify requirements. New language: " <u>(6) A USDA soil survey map, if available, of proposed sites for land application of biosolids</u> ;"
	9VAC25- 32-60 F 2 d (7)		Add to clarify requirements. New language: " <u>(7) The name, mailing address, and telephone number of each site owner, if different from the applicant</u> ;"
	9VAC25- 32-60 F 2 d (8)		Add to clarify requirements. New language: " <u>(8) The name, mailing address, and telephone number of the person who</u>

			<u>applies biosolids to the site, if different from the applicant;</u> "
	9VAC25-32-60 F 2 d (9)		Add to clarify requirements. New language: <u>"(9) Whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such site types are defined in 9VAC25-32-10;</u>
	9VAC25-32-60 F 2 d (10)		Add to clarify requirements. New language: <u>"(10) Description of agricultural practices including a list of proposed crops to be grown;"</u>
	9VAC25-32-60 F 2 d (11)		Add to clarify requirements. New language: <u>"(11) The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site:"</u>
	9VAC25-32-60 F 2 d (11) (a)		Add to clarify requirements. New language: <u>"(a) Whether the applicant has contacted the permitting authority in the state where the bulk biosolids subject to 9VAC25-32-356 Table 3 will be applied to ascertain whether bulk biosolids subject to 9VAC25-32-356 Table 3 has been applied to the site on or since July 20, 1993, and if so, the name of the permitting authority and the name and phone number of a contact person at the permitting authority; and"</u>
	9VAC25-32-60 F 2 d (11) (b)		Add to clarify requirements. New language: <u>"(b) Identification of facilities other than the applicant's facility that have sent, or are sending, biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site since July 20, 1993, if based on the inquiry in subdivision 8 d (1) of this subsection, bulk biosolids subject to cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993; and"</u>
	9VAC25-32-60 F 3		Add to clarify requirements. New language: <u>"3. A biosolids management plan shall be provided that includes the following minimum site specific information at the time of permit application."</u>
	9VAC25-32-60 F 3 a		Add to clarify requirements. New language: <u>"a. Description of operation: A comprehensive, general description of the operation as required by 9VAC25-32-60."</u>

	9VAC25-32-60 F 3 b		Add to clarify requirements. New language: " <u>b. A nutrient management plan approved by the Department of Conservation and Recreation as required for application sites prior to board authorization under the following conditions.</u> "
	9VAC25-32-60 F 3 b (1)		Add to clarify requirements. New language: " <u>(1) Sites operated by an owner or lessee of a confined animal feeding operation as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia.</u> "
	9VAC25-32-60 F 3 b (2)		Add to clarify requirements. New language: " <u>(2) Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;</u> "
	9VAC25-32-60 F 3 b (3)		Add to clarify requirements. New language: " <u>(3) Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or</u> "
	9VAC25-32-60 F 3 b (4)		Add to clarify requirements. New language: " <u>(4) Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.</u> "
	9VAC25-32-60 F 4		Add to clarify requirements. Add new subdivision to address requirements for biosolids transport. New language: " <u>4. Biosolids transport.</u> "
	9VAC25-32-60 F 4 a		Add to clarify requirements. New language: " <u>a. General description of transport vehicles to be used.</u> "
	9VAC25-32-60 F 4 b		Add to clarify requirements. New language: " <u>b. Procedures for biosolids offloading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning); field reclamation and emergency spill notification and cleanup measures.</u> "
	9VAC25-32-60 F 4 c		Add to clarify requirements. New language: " <u>c. Voucher system used for documentation and recordkeeping.</u> "
	9VAC25-32-60 F 5		Add to clarify requirements. Add new subdivision to address requirements for "field operations". New language: " <u>5. Field operations.</u> "

	9VAC25-32-60 F 5 a		Add to clarify requirements. New language: " <u>a. Storage.</u> "
	9VAC25-32-60 F 5 a (1)		Add to clarify requirements. New language: " <u>(1) Routine storage – supernatant handling ad disposal, biosolids handling and loading of transport vehicles, equipment cleaning, freeboard maintenance, and inspections for structural integrity.</u> "
	9VAC25-32-60 F 5 a (2)		Add to clarify requirements. New language: " <u>(2) On-site storage – procedures for department or board approval and implementation.</u> "
	9VAC25-32-60 F 5 a (3)		Add to clarify requirements. New language: " <u>(3) Staging – procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner or cover requirements and the time limit assigned for such use.</u> "
	9VAC25-32-60 F 5 a (4)		Add to clarify requirements. New language: " <u>(4) Reestablishment of offloading and staging areas.</u> "
	9VAC25-32-60 F 5 b		Add to clarify requirements. New language: " <u>b. Application methodology.</u> "
	9VAC25-32-60 F 5 b (1)		Add to clarify requirements. New language: " <u>(1) Description and specifications on spreader vehicles.</u> "
	9VAC25-32-60 F 5 b (2)		Add to clarify requirements. New language: " <u>(2) Procedures for calibrating equipment for various biosolids contents to ensure uniform distribution and appropriate loading rates on a day-to-day basis.</u> "
	9VAC25-32-60 F 5 b (3)		Add to clarify requirements. New language: " <u>(3) Procedures used to ensure that operations address the following constraints: application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice-covered or snow-covered ground; establishment of setback distances; slopes; prohibited access for beef and dairy animals, and soil pH requirements; and proper site specific biosolids loading raters on a field-by-field basis.</u> "
	9VAC25-32-60 F 5		Add to clarify requirements. New language: " <u>c. Odor control plan for land applier.</u> "

	c		Include at a minimum:"
	9VAC25-32-60 F 5 c (1)		Add to clarify requirements. New language: <u>"(1) Methods used to identify and abate malodorous biosolids in the field prior to land application, and"</u>
	9VAC25-32-60 F 5 c (2)		Add to clarify requirements. New language: <u>"(2) Methods used to abate malodorous biosolids if land applied."</u>
	9VAC25-32-60 F 6		Add to clarify requirements. New language: <u>"6. An applicant for a permit authorizing the land application of biosolids shall provide to the department, and to each locality in which the applicant proposes to land apply biosolids, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with the requirements specified under Article 6 (9VAC25-32-770 et seq.) of Part IX of this chapter."</u>
9VAC25-32-80 H 2		Monitoring and records: Records related to biosolids data and information specified in agreements. "2. The permittee shall retain records of all monitoring information...This period may be extended by request of the board at any time. Records related to biosolids data and information specified in agreements between generator, owner, agents, landowners and farmers shall be described and maintained for a minimum period of five years or the duration of the permit or subsequent revisions if longer than five years."	Regulatory language related to records related to biosolids data and information specified in agreements moved to new subdivision 9VAC25-32-80 H 5. Revised to read: "2. The permittee shall retain records of all monitoring information...This period may be extended by request of the board at any time. Records related to biosolids data and information specified in agreements between generator, owner, agents, landowners and farmers shall be described and maintained for a minimum period of five years or the duration of the permit or subsequent revisions if longer than five years."
	9VAC25-32-80 H 5	Originally part of 9VAC25-32-80 H 2.	New subdivision language: <u>"5. Records related to biosolids data and information specified in agreements between generator, owner, agents, landowners and farmers shall be described and maintained for a minimum period of five years or the duration of the permit or subsequent revisions if longer than five years."</u>
9VAC25-32-80 I 6		"a. The permittee shall	Insert the phrase "to the department" to

a		report any noncompliance which may adversely affect state waters or may endanger public health. An oral report must be provided as soon as possible, but in no case later than 24 hours from the time the permittee becomes aware of the circumstances..."	clarify the requirement. Revised to read: "a. The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health. An oral report must be provided to <u>the department</u> as soon as possible, but in no case later than 24 hours from the time the permittee becomes aware of the circumstances..."
9VAC25-32-100	9VAC25-32-100 A	"In addition to the conditions established in 9VAC25-32-80 and 9VAC25-32-90, each VPA permit shall include conditions meeting the following requirements where applicable:"	Section numbering added to clarify requirements. Revised to read: " <u>A.</u> In addition to the conditions established in 9VAC25-32-80 and 9VAC25-32-90, each VPA permit shall include conditions meeting the following requirements where applicable:"
9VAC25-32-100 1	9VAC25-32-100 A 1	"1. Determination of limitations..."	Subdivision numbering revised to clarify requirements.
9VAC25-32-100 2	9VAC25-32-100 A 2	"2. Duration of VPA permits..."	Subdivision numbering revised to clarify requirements.
9VAC25-32-100 3	9VAC25-32-100 B	"3. Monitoring requirements."	Subdivision numbering revised to clarify requirements. Revised to read: " 3. <u>B.</u> Monitoring requirements."
9VAC25-32-100 3 a	9VAC25-32-100 B 1	"a. All VPA permits may specify:"	Subdivision numbering revised to clarify requirements. Revised to read: " a. <u>1.</u> All VPA permits may specify:"
9VAC25-32-100 3 a (1)	9VAC25-32-100 B 1 a	"(1) Requirements concerning the proper use, maintenance and installation, when appropriate, of monitoring equipment or methods;"	Subdivision numbering revised to clarify requirements. Revised to read: " (1) <u>a.</u> Requirements concerning the proper use, maintenance and installation, when appropriate, of monitoring equipment or methods;"
9VAC25-32-100 3 a (2)	9VAC25-32-100 B 1 b	"(2) Required monitoring including..."	Subdivision numbering revised to clarify requirements. Revised to read: " (2) <u>b.</u> Required monitoring including..."
9VAC25-32-100 3 a (3)	9VAC25-32-100 B 1 c	"(3) Applicable reporting requirements..."	Subdivision numbering revised to clarify requirements. Revised to read: " (3) <u>c.</u> Applicable reporting requirements..."
9VAC25-32-100 3 b	9VAC25-32-100 B 2	"b. VPA permits may include requirements to report monitoring results..."	Subdivision numbering revised to clarify requirements. Revised to read: " b. <u>2.</u> VPA permits may include requirements to report monitoring results..."
9VAC25-32-100 3 c	9VAC25-32-100 B 3	"c. In addition, the following monitoring requirements may be included in the VPA	Subdivision numbering revised to clarify requirements. Revised to read: " c. <u>3.</u> In addition, the following monitoring

		permits:"	requirements may be included in the VPA permits:"
9VAC25-32-100 3 c (1)	9VAC25-32-100 B 3 a	"(1) Mass or other measurements specified in the VPA permit for each pollutant of concern;"	Subdivision numbering revised to clarify requirements. Revised to read: " (1) <u>a.</u> Mass or other measurements specified in the VPA permit for each pollutant of concern;"
9VAC25-32-100 3 c (2)	9VAC25-32-100 B 3 b	"(2) The volume of waste, wastewater or sludge managed by the activity; and"	Subdivision numbering revised to clarify requirements. Insert term "biosolids" to clarify requirements. Revised to read: " (2) <u>b.</u> The volume of waste, wastewater, <u>biosolids</u> , or sludge managed by the activity; and"
9VAC25-32-100 3 c (3)	9VAC25-32-100 B 3 c	"(3) Other measurements as appropriate."	Subdivision numbering revised to clarify requirements. Revised to read: " (3) <u>c.</u> Other measurements as appropriate."
9VAC25-32-100 4	9VAC25-32-100 C	"4. Best Management Practices (BMPs)..."	Subdivision numbering revised to clarify requirements. Revised to read: "4. <u>C.</u> Best Management Practices (BMPs)..."
9VAC25-32-100 5	9VAC25-32-100 D	"5. Sludge disposal..."	Subdivision numbering revised to clarify requirements. Revised to read: "5. <u>D.</u> Sludge disposal..."
9VAC25-32-100 6	9VAC25-32-100 E	"6. Sewage sludge land application. Where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation routes..."	Subdivision numbering revised. Revised to replace "Sewage sludge" with "Biosolids" and "buffering" with "setback distances" to clarify requirements, to avoid confusion with "vegetated buffers" and to use consistent terminology. Language revised to read: "6. <u>E.</u> <u>Sewage sludge Biosolids</u> land application. Where, because of site-specific conditions...the department may incorporate in the permit at the time it is issued reasonable special conditions regarding <u>buffering setback distances</u> , transportation routes..."
9VAC25-32-100 7	9VAC25-32-100 F	"7. Schedules of compliance..."	Subdivision numbering revised to clarify requirements. Revised to read: "7. <u>F.</u> Schedules of compliance..."
9VAC25-32-100 7 a	9VAC25-32-100 F 1	"a. Schedule or schedules of compliance shall require..."	Subdivision numbering revised to clarify requirements. Revised to read: "a. <u>1.</u> Schedule or schedules of compliance shall require..."
9VAC25-32-100 7 b	9VAC25-32-100 F 2	"b. The schedule of compliance shall set forth interim time periods..."	Subdivision numbering revised to clarify requirements. Revised to read: "b. <u>2.</u> The schedule of compliance shall set forth interim time periods..."
9VAC25-32-100 7 c	9VAC25-32-100 F 3	"c. Schedules or schedules of compliance may be modified..."	Subdivision numbering revised to clarify requirements. Revised to read: "c. <u>3.</u> Schedules or schedules of compliance may be modified..."

	9VAC25-32-140 A		Add new subsection header to clarify requirements. New language added: " <u>A. Draft VPA permits.</u> "
9VAC25-32-140 A	9VAC25-32-140 A 1	"A. Every draft VPA permit shall be given public notice..."	Renumbered to account for addition of new subsection. Revised to read: " <u>A-1.</u> Every draft VPA permit shall be given public notice..."
9VAC25-32-140 B	9VAC25-32-140 A 2	"B. Interested persons shall have a period of at least 30 days...to submit written comments..."	Renumbered to account for addition of new subsection. Revised to read: " <u>B-2.</u> Interested persons shall have a period of at least 30 days...to submit written comments..."
9VAC25-32-140 C	9VAC25-32-140 A 3	"C. The contents of the public notice of an application for a VPA permit shall include:"	Renumbered to account for addition of new subsection. Revised to read: " <u>C-3.</u> The contents of the public notice of an application for a VPA permit shall include:"
9VAC25-32-140 C 1	9VAC25-32-140 A 3 a	"1. The name and address of the applicant..."	Renumbered to account for addition of new subsection. Revised to read: " <u>4-a.</u> The name and address of the applicant..."
9VAC25-32-140 C 2	9VAC25-32-140 A 3 b	"2. A brief description of the business or activity..."	Renumbered to account for addition of new subsection. Revised to read: " <u>2-b.</u> A brief description of the business or activity..."
9VAC25-32-140 C 3	9VAC25-32-140 A 3 c	"3. A statement of the tentative determination to issue or deny a VPA permit;"	Renumbered to account for addition of new subsection. Revised to read: " <u>3-c.</u> A statement of the tentative determination to issue or deny a VPA permit;"
9VAC25-32-140 C 4	9VAC25-32-140 A 3 d	"4. A brief description of the final determination procedure;"	Renumbered to account for addition of new subsection. Revised to read: " <u>4-d.</u> A brief description of the final determination procedure;"
9VAC25-32-140 C 5	9VAC25-32-140 A 3 e	"5. The address and phone number of a specific person at the state office..."	Renumbered to account for addition of new subsection. Revised to read: " <u>5-e.</u> The address and phone number of a specific person at the state office..."
9VAC25-32-140 C 6	9VAC25-32-140 A 3 f	"6. A brief description of how to submit comments and request a hearing."	Renumbered to account for addition of new subsection. Revised to read: " <u>6-f.</u> A brief description of how to submit comments and request a hearing."
9VAC25-32-140 D		"D. Public notice shall not be required for submission or approval of plans and specifications or conceptual engineering reports not required to be submitted as part of the application."	Delete subsection. Requirements now included as new subsection 9VAC25-32-140 B 4.
	9VAC25-32-140 B		Add new subsection header. New language added: " <u>B. VPA permit application.</u> "
9VAC25-32-140 E	9VAC25-32-140 B	"E. Upon receipt of an application for a permit or	Renumbered to account for reorganization of material and the addition of a new

	1	for a modification of a permit, the board shall:"	subsection heading. Revised to clarify requirements. Revised to read: " E. 1. Upon receipt of an application for <u>a the issuance of a new or modified permit or for a modification of a permit</u> , the <u>board department</u> shall <u>notify in writing the locality wherein the pollutant management activity does or is proposed to take place.</u> <u>This notification shall, at a minimum, include:</u> "
9VAC25-32-140 E 1		"1. Cause to be notified, in writing, the locality wherein the pollutant management activity does or is proposed to take place. This notification shall, at a minimum, include:"	Delete subsection. Now included as part of 9VAC25-32-140 B 1.
9VAC25-32-140 E 1 a	9VAC25-32-140 B 1 a	"a. The name of the applicant;"	Renumbered to account for reorganization of material and the addition of a new subsection heading.
9VAC25-32-140 E 1 b	9VAC25-32-140 B 1 b	"b. The nature of the application and proposed pollutant management activity; and	Renumbered to account for reorganization of material and the addition of a new subsection heading. Revised to account for the addition of a new requirement, delete "and". Revised to read: "b. The nature of the application and proposed pollutant management activity; and
	9VAC25-32-140 B 1 c		Add notification requirement. New language added: " <u>c. The availability and timing of any comment period; and</u> "
9VAC25-32-140 E 1 c	9VAC25-32-140 B 1 d	"c. Upon request, any other information..."	Renumbered to account for reorganization of material and the addition of a new subsection heading. Revised to read: " e. d. Upon request, any other information..."
9VAC25-32-140 E 2	9VAC25-32-140 B 2	"2. Establish a date for a public meeting to discuss technical issues relating to proposals for land application of biosolids...Public notice of the scheduled meeting shall occur no fewer than seven or more than 14 days prior to the meeting. The board shall not issue the permit until the public meeting has been held..."	Renumbered to account for reorganization of material and the addition of a new subsection heading. Replace "or" with "nor" and replace "board" with "department". Language added to clarify requirements. Revised to read: "2. Establish <u>Whenever the department receives an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, or an application to reissue with the addition of sites increasing acreage by 50% or more of that authorized in the initial permit, the department shall establish a date for a public meeting to</u>

			discuss technical issues relating to proposals for land application of biosolids...Public notice of the scheduled meeting shall occur no fewer than seven or <u>nor more than 14 days</u> prior to the meeting. The board <u>department</u> shall not issue the permit until the public meeting has been held..."
	9VAC25-32-140 B 3		Added to clarify requirements. Based on discussions with the AG's Office. New language added: " <u>3. Following the submission of an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge, or stabilized septage, the department shall make a good faith effort to notify or cause to be notified persons residing on property bordering the sites that contain the proposed land application fields. This notification shall be in a manner selected by the department. For the purposes of this subsection, "site" means all contiguous land under common ownership, but which may contain more than one tax parcel.</u> "
9VAC25-32-140 D	9VAC25-32-140 B 4		Add text added to clarify requirements – originally included as 9VAC25-32-140 D. Language added: " <u>4. Public notice shall not be required for submission or approval of plans and specifications or conceptual engineering reports not required to be submitted as part of the application.</u> "
	9VAC25-32-140 C		Add new section regarding addition of land to clarify requirements. New language added: " <u>C. Following submission of an application to add a site that is not contiguous to sites included in an existing permit authorizing the land application of biosolids:</u> "
	9VAC25-32-140 C 1		Add new section regarding addition of land to clarify requirements. New language added: " <u>1. The department shall notify person residing on property bordering such site and shall receive written comments from those persons for a period of 30 days. Based upon written comments, the department shall determine whether additional site-specific requirements should be included in the authorization for land application at the site.</u> "

	9VAC25-32-140 C 2		Add new section regarding addition of land to clarify requirements. New language added: " <u>2. An application for any permit amendment to increase the acreage authorized by the initial permit by 50% or more shall be considered a major modification and shall be treated as a new application for purposes of public notice and public hearings. The increase in acreage for the purpose of determining the need for the public meeting is the sum of all acreage that has been added to the permit since the last public meeting, plus that proposed to be added.</u> "
9VAC25-32-140 F	9VAC25-32-140 D	"F. Before issuing any permit, if the board finds that there are localities particularly affected by the permit, the board shall:"	Renumbered to account for reorganization of material and the addition of a new subsection heading. Revised to read: " F. <u>D.</u> Before issuing any permit, if the board finds that there are localities particularly affected by the permit, the board shall:"
9VAC25-32-140 F 1	9VAC25-32-140 D 1		Renumbered to account for reorganization of material and the addition of a new subsection heading.
9VAC25-32-140 F 2	9VAC25-32-140 D 2		Renumbered to account for reorganization of material and the addition of a new subsection heading.
9VAC25-32-140 G		"G. When a site is to be added to an existing permit authorizing land application of biosolids, the department shall notify persons residing on property bordering such site, and shall receive written comments from those persons for a period not to exceed 30 days. Based upon the written comments, the department shall determine whether additional site specific requirements should be included in the authorization for land application at the site."	Subsection deleted. Requirements now included as part of new subdivision 9VAC25-32-140 C 1.
9VAC25-32-240 C		"C. An application for any permit amendments to increase the acreage authorized by the permit by 50% or more shall be	Revised to include reference to the "initial permit" and to clarify that increases of acreage are required to follow certain public participation requirements. Revised to include reference to public involvement

		treated as a new application for purposes of public notice and public hearings."	procedures. Revised to read: "C. An application for any permit amendments to increase the acreage authorized by the <u>initial permit by 50% or more shall be treated as a new application for purposes of public notice and public hearings shall require the public involvement procedures outlined in 9VAC25-32-140 C.</u> " Revised to clarify requirements and for consistency within the regulations. Based on discussions with the AG's Office.
9VAS25-32-260 2 a		"a. General VPA permits will be issued, modified, revoked and reissued, or terminated pursuant to the land and the board's Public Participation Guidelines (9VAC25-10-10 et seq.)."	Revised to correct reference. Revised to read: "a. General VPA permits will be issued, modified, revoked and reissued, or terminated pursuant to the land and the board's Public Participation Guidelines (9VAC25-10-10 et seq.) <u>Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia).</u> "
9VAC25-32-300 A		"A. Effective July 24, 1996, the following will occur:"	Delete. Language is obsolete.
9VAC25-32-300 A 1		"1. All VPA applications received after that date..."	Delete. Language is obsolete.
9VAC25-32-300 A 2		"2. Any owner holding a No Discharge Certificate will be notified..."	Delete. Language is obsolete.
9VAC25-32-300 B	9VAC25-32-300 A	"B. Permits issued by the Department of Health under the authority of the State Board of Health prior to January 1, 2008, shall continue in force until expired, reissued, amended, or terminated in accordance with the permit or this regulation. All owners holding biosolids use construction or operation permits as of January 1, 2008, shall submit an application for a Virginia Pollution Abatement Permit in accordance with this regulation within 180 days before the date of expiration of permits issued prior to January 1, 2008, or at the time of any modification request	Requirement reworded and restructured to clarify requirements. Revised to read: " <u>B- A. Permits issued prior to January 1, 2008,</u> by the Department of Health under the authority of the State Board of Health prior to January 1, 2008, shall continue in force until expired, reissued, amended, or terminated in accordance with the permit or this regulation. All owners holding biosolids use construction or operation permits as of January 1, 2008, shall submit an application for a Virginia Pollution Abatement Permit in accordance with this regulation within 180 days before the date of expiration of permits issued prior to January 1, 2008, or at the time of any modification request submitted after January 1, 2008, or by June 1, 2008, whichever is later. All owners of biosolids use facilities shall comply with the applicable requirements set forth in the operational regulations of Part IX (9VAC25-32-310 et seq.) of this chapter."

		submitted after January 1, 2008, or by June 1, 2008, whichever is later. All owners of biosolids use facilities shall comply with the applicable requirements set forth in the operational regulations of Part IX (9VAC25-32-310 et seq.) of this chapter."	
	9VAC25-32-300 B		Add new language to clarify requirements. New language added: " <u>B. All owners holding active biosolids use permits as of January 1, 2008, shall submit an application for a Virginia Pollution Abatement Permit in accordance with this regulation at least 180 days before the expiration date of permits issued prior to January 1, 2008, or by June 30, 2012, whichever comes first.</u> "
	9VAC25-32-300 C		Add new language to clarify requirements. New language added: " <u>C. All owners of biosolids use facilities shall comply with the applicable requirements set forth in the operational regulations of Part IX (9VAC25-32-303 et seq.) of this chapter.</u> "
	9VAC25-32-300 D		Add new language to clarify requirements. New language added: " <u>D. Notwithstanding the foregoing, all VDH-BUR permits shall terminate no later than December 31, 2012, if an administratively complete VPA application for the activity authorized by the VDH-BUR permit has not been submitted to the department.</u> "
	9VAC25-32-303		Add a Part IX header to new section on purpose and applicability. New header language: " <u>Part IX Biosolids Program Article 1 Procedures and Requirements</u> "
	9VAC25-32-303		Add new section to clarify requirements. New section header language: " <u>9VAC25-32-303. Purpose and applicability.</u> "
	9VAC25-32-303 A		Add new subsection stating the purpose of this "part" of the regulations to establish standards. New language added: " <u>A. This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use of biosolids or disposal of sewage sludge generated during the treatment of domestic sewage in</u> "

			<u>a treatment works. Standards are included in this part for biosolids applied to the land. Also included in this part are pathogen and alternative vector attraction reduction requirements for biosolids applied to the land.</u>
	9VAC25-32-303 B		Add new subsection to clarify that the standards also include the frequency of monitoring and recordkeeping requirements. New language added: " <u>B. The standards in this part also include the frequency of monitoring and recordkeeping requirements when biosolids is applied to the land.</u> "
	9VAC25-32-303 C		Add new subsection to clarify the applicability of the requirements in this part of the regulations. New language added: " <u>C. Applicability.</u> "
	9VAC25-32-303 C 1		Add new subdivision to clarify applicability. New language added: " <u>1. This part applies to any person who prepares biosolids or applies biosolids to the land.</u> "
	9VAC25-32-303 C 2		Add new subdivision to clarify applicability. New language added: " <u>2. This part applies to biosolids applied to the land.</u> "
	9VAC25-32-303 C 3		Add new subdivision to clarify applicability. New language added: " <u>3. This part applies to land where biosolids is applied.</u> "
	9VAC25-32-305		Add new section to address "permits". New language added: " <u>9VAC25-32-305. Permits.</u> "
	9VAC25-32-305 A		Add new subsection to clarify requirements for permits. New language added: " <u>A. No owner shall cause or allow any land application, marketing, or distribution of biosolids except in compliance with a permit issued by the board that authorizes these activities.</u> "
	9VAC25-32-305 B		Add new subsection to clarify requirements for permits. New language added: " <u>B. A separate biosolids use permit shall be issued for each political jurisdiction (county or city) where land application is proposed.</u> "
	9VAC25-32-305 C		Added language to clarify requirement for permittees who land apply sewage sludge/biosolids. New language added: " <u>C. No person shall land apply Class B biosolids on any land in Virginia unless that land has been identified in an application to</u>

			<u>issue, reissue or modify a permit and approved by the board.</u> "
	9VAC25-32-305 D		Added language to clarify requirements or permittees who land apply sewage sludge/biosolids. New language added: " <u>D. No person shall land apply, market or distribute biosolids in Virginia unless the biosolids source has been approved by the board.</u> "
	9VAC25-32-307		Add new section to clarify relationship with other regulations. New language added: " <u>9VAC25-32-307. Relationship to other regulations.</u> "
	9VAC25-32-307 A		Add new subsection to clarify the requirements related to compliance with § 405 (d) of the CWA. New language added: " <u>A. Disposal of sewage sludge in a municipal solid waste landfill unit that complies with the requirements in the Virginia Solid Waste Management Regulation (9VAC20-81) constitutes compliance with § 405 (d) of the federal Clean Water Act.</u> "
	9VAC25-32-307 B		Added new subsection to clarify the requirements related to the quality of materials disposed in a municipal solid waste landfill. New language added: " <u>B. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit shall ensure that the sewage sludge meets the requirements in 9VAC20-81 concerning the quality of materials disposed in a municipal solid waste landfill.</u> "
9VAC25-32-310		Definitions.	Repeal section – definitions now included in main definition section – 9VAC25-32-10. Part IX header deleted – now included in new section 9VAC25-32-303.
	9VAC25-32-313		Add new section to clarify "general requirements". New language added: " <u>9VAC25-32-313. General requirements.</u> "
	9VAC25-32-313 A		Add language to clarify general requirements. New language added: " <u>A. No person shall apply biosolids to the land except in accordance with the requirements in this article.</u> "
	9VAC25-32-313 B		Add language to clarify general requirements. New language added: " <u>B. No person shall apply bilk biosolids to the land if it is likely to adversely affect a threatened</u>

			or endangered species listed in 9VAC25-260-320 or § 4 of the Endangered Species Act (16 USC § 1533) or if the land application is likely to adversely affect its designated critical habitat."
	9VAC25-32-313 C	"	Add language to clarify general requirements. New language added: " <u>C. No person shall apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been reached.</u> "
	9VAC25-32-313 D		Add language to clarify general requirements. New language added: " <u>D. No person shall apply domestic septage to agricultural land, forest, or a reclamation site during a 365-day period if the annual application rate in 9VAC25-32-356 D has been reached during that period.</u> "
	9VAC25-32-313 E		Add language to clarify general requirements. New language added: " <u>E. The person who prepares bulk biosolids that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk biosolids written notification of the concentration of total nitrogen and phosphorus (as N and P on a dry weight basis) in the bulk biosolids.</u> "
	9VAC25-32-313 F		Add language to clarify general requirements. New language added: " <u>F. Before bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 is applied to the land, the person who proposes to apply the bulk biosolids shall contact the department to determine whether bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993.</u> "
	9VAC25-32-313 F 1		Add language to clarify general requirements. New language added: " <u>1. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has not been applied to the site since July 20, 1993, the cumulative amount of each pollutant listed in 9VAC25-32-356</u>

			Table 3 may be applied to the site in accordance with 9VAC25-32-356 B 2 a."
	9VAC25-32-313 F 2		Add language to clarify general requirements. New language added: " <u>2. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied...to determine the additional amount of each pollutant that can be applied to the site in accordance with 9VAC25-32-356 B 2 a.</u> "
	9VAC25-32-313 F 3		Add language to clarify general requirements. New language added: " <u>3. If bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk biosolids since that date is not known, an additional amount of each of pollutant shall not be applied to the site in accordance with 9VAC25-32-356 B 2 a.</u> "
	9VAC25-32-313 G		Add language to clarify general requirements. New language added: " <u>G. When a person who prepares bulk biosolids provides the bulk biosolids to a person who applies the bulk biosolids to the land, the person who prepares the bulk biosolids shall provide the person who applies the biosolids notice and necessary information to comply with the requirements in this article.</u> "
	9VAC25-32-313 H		Add language to clarify general requirements. New language added: " <u>H. When a person who prepares biosolids provides the biosolids to another person who prepares the biosolids, the person who provides the biosolids shall provide the person who receives the biosolids notice and necessary information to comply with the requirements in this article.</u> "
	9VAC25-32-313 I		Add language to clarify general requirements. New language added: " <u>I. The person who applies bulk biosolids to the land shall provide the owner or lease holder of the land on which the bulk biosolids is applied notice and necessary information to comply with the requirements in this article.</u> "
	9VAC25-32-313 J		Add language to clarify general requirements. New language added: " <u>J.</u> "

			<u>Any person who prepares bulk biosolids in another state that is applied to land in Virginia shall provide written notice to the department prior to the initial application of bulk biosolids to the land application site by the applier. The notice shall include:"</u>
	9VAC25-32-313 J 1		Add language to clarify general requirements related to notice content. New language added: " <u>1. The location, by either street address or latitude and longitude, of each land application site;"</u>
	9VAC25-32-313 J 2		Add language to clarify general requirements related to notice content. New language added: " <u>2. The approximate time period bulk biosolids will be applied to the site;"</u>
	9VAC25-32-313 J 3		Add language to clarify general requirements related to notice content. New language added: " <u>3. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk biosolids, and,"</u>
	9VAC25-32-313 J 4		Add language to clarify general requirements related to notice content. New language added: " <u>4. The name, address, telephone number, and National (or Virginia) Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids."</u>
	9VAC25-32-313 K		Add language to clarify general requirements. New language added: " <u>K. Any person who applies bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the land shall provide written notice, prior to the initial application of bulk biosolids to the land application site by the applier, to the department and the department shall retain and provide access to the notice. The notice shall include:"</u>
	9VAC25-32-313 K 1		Add language to clarify general requirements related to notice content. New language added: " <u>1. The location, by either street address or latitude and longitude, of the land application site, and"</u>
	9VAC25-32-313 K		Add language to clarify general requirements related to notice content.

	2		New language added: " <u>2. The name, address, telephone number, and Virginia Pollution Abatement permit number (if appropriate) of the person who will apply the bulk biosolids.</u> "
	9VAC25-32-315		Add new section to clarify additional and more stringent requirements. New language added: " <u>9VAC25-32-315. Additional and more stringent requirements.</u> "
	9VAC25-32-315 A		Add new subsection to clarify additional and more stringent requirements. New language added: " <u>A. On a case-by-case basis, the board may impose requirements on the use of biosolids or the disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effects of a pollutant in the biosolids or sewage sludge.</u> "
	9VAC25-32-315 B		Add new subsection to clarify additional and more stringent requirements. New language added: " <u>B. Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.</u> " Statute gives local government specific authority; it cannot be more stringent than this regulation
	9VAC25-32-315 C		Add new subsection to clarify additional and more stringent requirements. New language added: " <u>C. For biosolids land application where, because of site specific conditions, including soil type, identified during the permit application review process, the department determines that special requirements are necessary to protect the environment or the health, safety, or welfare of persons residing in the vicinity of a proposed land application site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding setback distances, transportation routes, slope, material source, methods of handling and application, and time of day restrictions exceeding those required by this regulation. The permit applicant shall have</u>

			at least 14 days in which to review and respond to the proposed conditions."
	9VAC25-32-317		Add new section to clarify exclusions to the biosolids regulations. Language from VPDES added for consistency between the regulations. New language added: " <u>9VAC25-32-317. Exclusions.</u> "
	9VAC25-32-317 A		Add new subsection to clarify the exclusion for treatment processes. New language added: " <u>A. Treatment processes. This part does not establish requirements for processes to treat domestic sewage or for processes used to treat sewage sludge prior to final use or disposal, except as provided in 9VAC25-32-675 and 9VAC25-32-685.</u> "
	9VAC25-32-317 B		Add new subsection to clarify the exclusion related to the selection of a use or disposal practice. New language added: " <u>B. Selection of a use or disposal practice. This part does not dictate the selection of a specific biosolids use or sewage sludge disposal practice by the owner of the wastewater treatment works.</u> " Based on comments received.
	9VAC25-32-317 C		Add new subsection to clarify the exclusion related to the incineration of sewage sludge. New language added: " <u>C. Incineration of sewage sludge. This part does not establish requirements for sewage sludge fired in a sewage sludge incinerator or co-fired in an incinerator with other wastes or for the incinerator in which sewage sludge or other waste are co-fired.</u> "
	9VAC25-32-317 D		Add new subsection to clarify the exclusion related to hazardous sewage sludge. New language added: " <u>D. Hazardous sewage sludge. This part does not establish requirements for the use or disposal of sewage sludge determined to be hazardous in accordance with 40 CFR Part 261 (2000) or the Code of Virginia.</u> "
	9VAC25-32-317 E		Add new subsection to clarify the exclusion related to sewage sludge with high PCB concentration. New language added: " <u>E. Sewage sludge with high PCB concentration. This part does not establish requirements for the use or disposal of sewage sludge with a concentration of polychlorinated biphenyls (PCBs) equal to</u>

			or greater than 50 milligrams per kilogram of total solids (dry weight basis)."
	9VAC25-32-317 F		Add new subsection to clarify the exclusion related to incinerator ash. New language added: " <u>F. Incinerator ash. This part does not establish requirements for the use or disposal of ash generated during the firing of sewage sludge in a sewage sludge incinerator.</u> "
	9VAC25-32-317 G		Add new subsection to clarify the exclusion related to grit and screenings. New language added: " <u>G. Grit and screenings. This part does not establish requirements for the use or disposal of grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.</u> "
9VAC25-32-320 A		"A. In the event of a dispute between a locality that has adopted a local ordinance for testing and monitoring the land application of sewage sludge and a permittee concerning the existence of a violation, the activity alleged to be in violation shall be halted pending a determination by the director. The decision of the director shall be final and binding unless reversed on judicial appeal pursuant to § 2.2-4026 of the Code of Virginia. If the activity is not halted, the director may seek an injunction compelling the halting of the activity, from a court having jurisdiction."	Revise to clarify requirements and replace the term "sewage sludge" with "biosolids". Delete language that is duplicative of that in statute and not necessary for inclusion as part of the regulations. Revised to read: "A. In the event of a dispute <u>concerning the existence of a violation</u> between a <u>permittee and a locality</u> that has adopted a local ordinance for testing and monitoring <u>of the land application of sewage sludge and a permittee concerning the existence of a violation biosolids</u> , the activity alleged to be in violation shall be halted pending a determination by the director. The decision of the director shall be final and binding unless reversed on judicial appeal pursuant to § 2.2-4026 of the Code of Virginia. If the activity is not halted, the director may seek an injunction compelling the halting of the activity, from a court having jurisdiction. "
9VAC25-32-320 C		"C. Local governments shall promptly notify the department of all results from the testing and monitoring of the land application of sewage sludge..."	Correct terminology - replace the term "sewage sludge" with "biosolids". Revised to read: "C. Local governments shall promptly notify the department of all results from the testing and monitoring of the land application of sewage sludge <u>biosolids</u> ..."
	9VAC25-32-320 D		Add language from repealed section 9VAC25-32-510. Language added: " <u>D.</u>

			<u>Local governments receiving complaints concerning land application of biosolids shall notify the department and the permit holder within 24 hours of receiving the complaint."</u>
9VAC25-32-330 B		"B. Requirements for a variance. The board may grant a variance if it finds that the hardship imposed (may be economic) outweighs the benefits that may be received by the public..."	Delete the wording "may be economic". Language to be included in guidance. Revised to read: "B. Requirements for a variance. The board may grant a variance if it finds that the hardship imposed (may be economic) outweighs the benefits that may be received by the public..."
9VAC25-32-330 C		"C. Application for a variance. Any owner may apply in writing for a variance. The application should be sent to the appropriate regional office for evaluation. The application shall include:"	Clarify regulation requirements by changing the text to read: "C. Application for a variance. Any owner may apply in writing for a variance. The application should shall be sent <u>submitted</u> to the appropriate regional office for evaluation. The application shall include:"
9VAC25-32-330 E 1		"E. Disposition of a variance request. 1. The board may grant the variance request and if the board proposes to deny the variance it shall provide the owner an opportunity to an informal hearing as provided in § 2.2-4019 of the Code of Virginia. Following this opportunity for an informal hearing the board may reject any application for a variance by sending a rejection notice to the applicant. The rejection notice shall be in writing and shall state the reason for the rejection. A rejection notice constitutes a case decision."	Correct terminology to conform to statute (§ 2.2-4019 of the Code of Virginia). Replace the term "hearing" with "proceeding". Revise to read: "E. Disposition of a variance request. 1. The board may grant the variance request and if the board proposes to deny the variance it shall provide the owner an opportunity to an informal [hearing <u>proceeding</u>] as provided in § 2.2-4019 of the Code of Virginia. Following this opportunity for an informal [hearing <u>proceeding</u>] the board may reject any application for a variance by sending a rejection notice to the applicant. The rejection notice shall be in writing and shall state the reason for the rejection. A rejection notice constitutes a case decision."
9VAC25-32-340		Permits.	Section repealed. Text moved to 9VAC25-32-305 for better introduction to section and consistency with VPDES.
9VAC25-32-355		Biosolids Use Regulation Advisory Committee.	Repeal section. Part of VDH Biosolids Use Regulations - No longer needed.
	9VAC25-32-356		Add new article heading. Language added: " <u>Article 2 Operational and Monitoring Requirements</u> "

	9VAC25-32-356		Added new section to clarify the pollutant monitoring and limits requirements. New section title added: " <u>9VAC25-32-356. Pollutant monitoring and limits</u> ".																																								
	9VAC25-32-356 A		Added new subsection to clarify the monitoring requirements for bulk biosolids. " <u>A. Bulk biosolids or biosolids sold or given away in a bag or other container shall be monitored for the parameters identified in Table 1 of this section.</u> "																																								
	9VAC25-32-356 Table 1		<p>Pollutant Monitoring and Limits; Parameters for Biosolids Analysis: Added new table to identify the parameters for biosolids analysis:</p> <table border="1"> <thead> <tr> <th colspan="2"><u>TABLE 1 PARAMETERS for BIOSOLIDS ANALYSIS⁽¹⁾</u></th> </tr> <tr> <th colspan="2"><u>Pollutant</u></th> </tr> </thead> <tbody> <tr><td><u>Percent solids (%)</u></td><td></td></tr> <tr><td><u>Volatile solids (%)</u></td><td></td></tr> <tr><td><u>pH (standard units)</u></td><td></td></tr> <tr><td><u>Total Kjeldahl nitrogen (%)</u></td><td></td></tr> <tr><td><u>Ammonia nitrogen (%)</u></td><td></td></tr> <tr><td><u>Nitrates (mg/kg)</u></td><td></td></tr> <tr><td><u>Total phosphorus (%)</u></td><td></td></tr> <tr><td><u>Total potassium (%)</u></td><td></td></tr> <tr><td><u>Alkalinity as CaCO₃ (mg/kg)⁽²⁾</u></td><td></td></tr> <tr><td><u>Arsenic (mg/kg)</u></td><td></td></tr> <tr><td><u>Cadmium (mg/kg)</u></td><td></td></tr> <tr><td><u>Copper (mg/kg)</u></td><td></td></tr> <tr><td><u>Lead (mg/kg)</u></td><td></td></tr> <tr><td><u>Mercury (mg/kg)</u></td><td></td></tr> <tr><td><u>Molybdenum (mg/kg)</u></td><td></td></tr> <tr><td><u>Nickel (mg/kg)</u></td><td></td></tr> <tr><td><u>Selenium (mg/kg)</u></td><td></td></tr> <tr><td><u>Zinc (mg/kg)</u></td><td></td></tr> </tbody> </table> <p>Added associated footnotes (1) <u>Values reported on a dry weight basis unless indicated.</u> and (2) <u>Lime treated biosolids (10% or more lime by weight) shall be analyzed for percent CaCO₃.</u></p>	<u>TABLE 1 PARAMETERS for BIOSOLIDS ANALYSIS⁽¹⁾</u>		<u>Pollutant</u>		<u>Percent solids (%)</u>		<u>Volatile solids (%)</u>		<u>pH (standard units)</u>		<u>Total Kjeldahl nitrogen (%)</u>		<u>Ammonia nitrogen (%)</u>		<u>Nitrates (mg/kg)</u>		<u>Total phosphorus (%)</u>		<u>Total potassium (%)</u>		<u>Alkalinity as CaCO₃ (mg/kg)⁽²⁾</u>		<u>Arsenic (mg/kg)</u>		<u>Cadmium (mg/kg)</u>		<u>Copper (mg/kg)</u>		<u>Lead (mg/kg)</u>		<u>Mercury (mg/kg)</u>		<u>Molybdenum (mg/kg)</u>		<u>Nickel (mg/kg)</u>		<u>Selenium (mg/kg)</u>		<u>Zinc (mg/kg)</u>	
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	9VAC25-32-356 B		Added new subsection number and title to read: " <u>B. Biosolids pollutant limits.</u> " Added to clarify requirements.																																								
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	1		New language added: " <u>1. Bulk biosolids or biosolids sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the biosolids exceeds the ceiling concentration for the pollutant in Table 2 of this section.</u> "
	9VAC25-32-356 B 2		Added new subdivision to clarify requirements for biosolids pollutant limits. New language added: " <u>2. If bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site, either:</u> "
	9VAC25-32-356 B 2 a		Added new subdivision to clarify requirements. New language added: " <u>a. The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 3 of this section; or</u> "
	9VAC25-32-356 B 2 b		Added new subdivision to clarify requirements. New language added: " <u>b. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section.</u> "
	9VAC25-32-356 B 3		Added new subdivision to clarify requirements. New language added: " <u>3. If bulk biosolids is applied to a lawn or a home garden, the concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section.</u> "
	9VAC25-32-356 B 4		Added new subdivision to clarify requirements. New language added: " <u>4. If biosolids is sold or given away in a bag or other container for application to the land, either:</u> "
	9VAC25-32-356 B 4 a		Added new subdivision to clarify requirements. New language added: " <u>a. The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 4 of this section; or</u> "
	9VAC25-32-356 B 4 b		Added new subdivision to clarify requirements. New language added: " <u>b. The product of the concentration of each pollutant in the biosolids and the annual whole sludge application rate for the biosolids shall not cause the annual pollutant loading rate for the pollutant in</u> "

			Table 5 of this section to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in subsection D of this section."																													
	9VAC25-32-356 C		Added new subsection to address pollutant concentrations and loading rates for biosolids. New language added: " <u>C. Pollutant concentrations and loading rates - biosolids.</u> "																													
	9VAC25-32-356 C Table 2		<p>Add Table 2 to specify ceiling concentrations for pollutants in biosolids. New language added:</p> <table border="1"> <thead> <tr> <th colspan="2"><u>TABLE 2</u> <u>CEILING CONCENTRATIONS</u></th> </tr> <tr> <th><u>Pollutant</u></th> <th><u>Ceiling Concentration (milligrams per kilogram)*</u></th> </tr> </thead> <tbody> <tr> <td><u>Arsenic</u></td> <td><u>75</u></td> </tr> <tr> <td><u>Cadmium</u></td> <td><u>85</u></td> </tr> <tr> <td><u>Copper</u></td> <td><u>4,300</u></td> </tr> <tr> <td><u>Lead</u></td> <td><u>840</u></td> </tr> <tr> <td><u>Mercury</u></td> <td><u>57</u></td> </tr> <tr> <td><u>Molybdenum</u></td> <td><u>75</u></td> </tr> <tr> <td><u>Nickel</u></td> <td><u>420</u></td> </tr> <tr> <td><u>Selenium</u></td> <td><u>100</u></td> </tr> <tr> <td><u>Zinc</u></td> <td><u>7,500</u></td> </tr> <tr> <td colspan="2"><u>*Dry weight basis</u></td> </tr> </tbody> </table>	<u>TABLE 2</u> <u>CEILING CONCENTRATIONS</u>		<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)*</u>	<u>Arsenic</u>	<u>75</u>	<u>Cadmium</u>	<u>85</u>	<u>Copper</u>	<u>4,300</u>	<u>Lead</u>	<u>840</u>	<u>Mercury</u>	<u>57</u>	<u>Molybdenum</u>	<u>75</u>	<u>Nickel</u>	<u>420</u>	<u>Selenium</u>	<u>100</u>	<u>Zinc</u>	<u>7,500</u>	<u>*Dry weight basis</u>						
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	<p>9VAC25-32-356 D</p>		<p>Add subsection to clarify the procedures to determine the annual whole sludge application rate (AWSAR) for biosolids. New language added: "<u>D. Procedures to determine the annual whole sludge</u></p>																																			

		<p><u>application rate (AWSAR) for biosolids. Subdivision B 4 b of this section requires that the product of the concentration for each pollutant listed in Table 4 of this section in biosolids sold or given away in a bag or other container for application to the land and the AWSAR for the biosolids not cause the annual pollutant loading rate for the pollutant in Table 5 to be exceeded. This subsection contains that procedure used to determine the AWSAR for a biosolids that does not cause the annual pollutant loading rates (APLR) in Table 5 of this section to be exceeded."</u></p>						
	<p>9VAC25-32-356 D 1</p>	<p>Added to clarify requirements. New language added: "<u>1. The relationship between the APLR for a pollutant and the AWSAR for a biosolids is shown in equation (1):</u></p> <table border="1"> <tr> <td style="text-align: center;"><u>EQUATION (1)</u></td> </tr> <tr> <td><u>APLR = C X AWSAR X 0.001</u></td> </tr> <tr> <td><u>APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period</u></td> </tr> <tr> <td><u>C = Pollutant concentration in milligrams per kilogram of total solids (dry weight basis)</u></td> </tr> <tr> <td><u>AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis)</u></td> </tr> <tr> <td><u>0.001 = A conversion factor</u></td> </tr> </table>	<u>EQUATION (1)</u>	<u>APLR = C X AWSAR X 0.001</u>	<u>APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period</u>	<u>C = Pollutant concentration in milligrams per kilogram of total solids (dry weight basis)</u>	<u>AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis)</u>	<u>0.001 = A conversion factor</u>
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	<p>9VAC25-32-356 D 2</p>	<p>Added to clarify requirements. New language added: "<u>2. To determine the AWSAR, equation (1) is rearranged into equation (2):</u></p> <table border="1"> <tr> <td style="text-align: center;"><u>EQUATION (2)</u></td> </tr> <tr> <td><u>AWSAR = APLR/(C X 0.001)</u></td> </tr> <tr> <td><u>AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis)</u></td> </tr> <tr> <td><u>APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period</u></td> </tr> <tr> <td><u>C = Pollutant concentration in milligrams per kilograms of total solids (dry weight basis)</u></td> </tr> </table>	<u>EQUATION (2)</u>	<u>AWSAR = APLR/(C X 0.001)</u>	<u>AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis)</u>	<u>APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period</u>	<u>C = Pollutant concentration in milligrams per kilograms of total solids (dry weight basis)</u>	
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			0.001 = A conversion factor
	9VAC25-32-356 D 3		Add subdivision to clarify the procedure to determine the AWSAR. New language added: " <u>3. The procedure used to determine the AWSAR for a biosolids is presented below:</u> "
	9VAC25-32-356 D 3 a		Add subdivision to clarify the procedure to determine the AWSAR. New language added: " <u>a. Analyze a sample of the biosolids to determine the concentration for each of the pollutants listed in Table 4 of this section in the biosolids.</u> "
	9VAC25-32-356 D 3 b		Add subdivision to clarify the procedure to determine the AWSAR. New language added: " <u>b. Using the pollutant concentrations from subdivision 3 a of this subsection and the APLRs from Table 5 of this section, calculate an AWSAR for each pollutant using Equation (2) above.</u> "
	9VAC25-32-356 D 3 c		Add subdivision to clarify the procedure to determine the AWSAR. New language added: " <u>c. The AWSAR for the biosolids is the lowest AWSAR calculated in subdivision 3 b of this subsection.</u> "
	9VAC25-32-357		Add new section to clarify operations standards, pathogens And vector attraction reduction requirements. New language added: " <u>9VAC25-32-357. Operational standards, pathogens, and vector attraction reduction.</u> "
	9VAC25-32-357 A		Add to clarify requirements. New language added: " <u>A. Biosolids shall be monitored to verify that the selected pathogen reduction treatment classification and vector attraction reduction method requirements have been met.</u> "
	9VAC25-32-357 B		Add to clarify requirements. New language added: " <u>B. Pathogens – biosolids.</u> "
	9VAC25-32-357 B 1		Add to clarify requirements. New language added: " <u>1. The Class A pathogen requirements in 9VAC25-32-675 A or the Class B pathogen requirements and site restrictions in 9VAC25-32-675 B shall be met when bulk biosolids is applied to agricultural land, forest land, a public contact site, or a reclamation site.</u> "
	9VAC25-32-357 B 2		Add to clarify requirements. New language added: " <u>2. The Class A pathogen requirements in 9VAC25-32-675 A shall be met when bulk biosolids is applied to a</u>

			lawn or a home garden."
	9VAC25-32-357 B 3		Add to clarify requirements. New language added: " <u>3. The Class A pathogen requirements in 9VAC25-32-675 A shall be met when biosolids is sold or given away in a bag or other container for application to the land.</u> "
	9VAC25-32-357 C		Add to clarify requirements. New language added: " <u>C. Pathogens – domestic septage. The requirements in either 9VAC25-32-675 C 1 or C 2 shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.</u> "
	9VAC25-32-357 D		Add to clarify requirements. New language added: " <u>D. Vector attraction reduction – biosolids.</u> "
	9VAC25-32-357 D 1		Add to clarify requirements. New language added: " <u>1. One of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 10 shall be met when bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site.</u> "
	9VAC25-32-357 D 2		Add to clarify requirements. New language added: " <u>2. One of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 shall be met when bulk biosolids is applied to a lawn or a home garden.</u> "
	9VAC25-32-357 D 3		Add to clarify requirements. New language added: " <u>3. One of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 shall be met when biosolids is sold or given away in a bag or other container for application to the land.</u> "
	9VAC25-32-357 E		Add to clarify requirements. New language added: " <u>E. Vector attraction reduction – domestic septage. The vector attraction reduction requirements in 9VAC25-32-685 B 9, B 10, or B 12 shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.</u> "
	9VAC25-32-357 F		Add to clarify requirements. New language added: " <u>F. Additional operational control information may be required on an individual basis by the department.</u> "
	9VAC25-32-358		Add new section to clarify the frequency of monitoring requirements. New language added: " <u>9VAC25-32-358. Frequency of monitoring.</u> "

	9VAC25-32-358 A		Add new subsection to clarify requirements. New language added: " <u>A. Biosolids.</u> "												
	9VAC25-32-358 A 1		<p>Add new subdivision and table to clarify requirements. New language added: "<u>1. The frequency of monitoring for the pollutants listed in Tables 1 through 5 of 9VAC25-32-356, the pathogen requirements in 9VAC25-32-675 A and B 2 through B 4; and the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 4, B 7, and B 8 shall be the frequency in Table 1 of this section.</u>"</p> <table border="1"> <thead> <tr> <th colspan="2"> <u>TABLE 1</u> <u>FREQUENCY OF MONITORING –</u> <u>LAND APPLICATION</u> </th> </tr> <tr> <th> <u>Amount of biosolids⁽¹⁾</u> <u>(metric tons per 365-day period)</u> </th> <th> <u>Frequency⁽²⁾</u> </th> </tr> </thead> <tbody> <tr> <td> <u>Greater than zero but less than 290</u> </td> <td> <u>Once per year</u> </td> </tr> <tr> <td> <u>Equal to or greater than 290 but less than 1,500</u> </td> <td> <u>Once per quarter (four times per year)</u> </td> </tr> <tr> <td> <u>Equal to or greater than 1,500 but less than 15,000</u> </td> <td> <u>Once per 60 days (six times per year)</u> </td> </tr> <tr> <td> <u>Equal to or greater than 15,000</u> </td> <td> <u>Once per month (12 times per year)</u> </td> </tr> </tbody> </table> <p> <u>Note ⁽¹⁾: Either the amount of bulk biosolids applied to the land or the amount of biosolids received by a person who prepares biosolids that is sold or given away in a bag or other container for application to the land (dry weight basis).</u> </p> <p> <u>Note ⁽²⁾: Sampling shall be conducted at approximately equal intervals at the listed frequencies. Biosolids programs that store biosolids and land apply only during discrete events throughout the year shall schedule sampling events to coincide with application periods. The department may require increased</u> </p>	<u>TABLE 1</u> <u>FREQUENCY OF MONITORING –</u> <u>LAND APPLICATION</u>		<u>Amount of biosolids⁽¹⁾</u> <u>(metric tons per 365-day period)</u>	<u>Frequency⁽²⁾</u>	<u>Greater than zero but less than 290</u>	<u>Once per year</u>	<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>	<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>	<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>
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			<u>monitoring frequencies, if necessary, to adequately define any significant variability in biosolids quality."</u>
	9VAC25-32-358 A 2		Add to clarify requirements. New language added: " <u>2. After the biosolids has been monitored for two years at the frequency in Table 1 of this section, the board may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in 9VAC25-32-675 A 5 b and c."</u>
	9VAC25-32-358 B		Add to clarify requirements for domestic septage. New language added: " <u>B. Domestic septage. If either the pathogen requirements in 9VAC25-32-675 C 2 or the vector attraction reduction requirements in 9VAC25-32-685 B 12 are met when domestic septage is applied to agricultural land, forest, or a reclamation site, each container of domestic septage applied to the land shall be monitored for compliance with those requirements."</u>
	9VAC25-32-359		Add new section to clarify the requirements for recordkeeping. New language added: " <u>9VAC25-32-359. Recordkeeping."</u>
	9VAC25-32-359 A		Add to clarify requirements. New language added: " <u>A. Biosolids."</u>
	9VAC25-32-359 A 1		Add to clarify requirements. New language added: " <u>1. If the pollutant concentration in Table 4 of 9VAC25-32-356, the Class A pathogen requirements in 9VAC25-32-675 A, and the vector attraction reduction requirements in either 9VAC25-32-685 B 9 or B 10 are met when bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site:"</u>
	9VAC25-32-359 A 1 a		Add to clarify requirements. New language added: " <u>a. The person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:"</u>
	9VAC25-32-359 A 1 a (1)		Add to clarify requirements. New language added: " <u>(1) The concentration of each pollutant listed in Table 4 of 9VAC25-32-356 in the bulk biosolids;"</u>
	9VAC25-32-359 A 1 a (2)		Add to clarify requirements. New language added: " <u>(2) The following certification statement: "I certify, under penalty of law, that the information that will be used to determine</u>

			<u>compliance with the pathogen requirements in 9VAC25-32-675 A was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment." ; and"</u>
	9VAC25-32-359 A 1 a (3)		Add to clarify requirements. New language added: " <u>(3) A description of how the pathogen requirements in 9VAC25-32-675 A are met.</u> "
	9VAC25-32-359 A 1 b		Add to clarify requirements. New language added: " <u>b. The person who applies the bulk biosolids shall develop the following information and shall retain the information for five years:</u> "
	9VAC25-32-359 A 1 b (1)		Add to clarify requirements. New language added: " <u>(1) The following certification statement:</u> <u>"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in 9VAC25-32-560 and the vector attraction reduction requirement in (insert either 9VAC25-32-685 B 9 or B 10) was prepared under my direction and supervisions in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment." ; and"</u>
	9VAC25-32-359 A 1 b (2)		Add to clarify requirements. New language added: " <u>(2) A description of how the management practices in 9VAC25-32-560 are met for each site on which bulk biosolids is applied; and"</u>
	9VAC25-32-359 A 1 b (3)		Add to clarify requirements. New language added: " <u>(3) A description of how the vector attraction reduction requirements in either 9VAC25-32-685 B 9 or B 10 are met for each site on which bulk biosolids is applied.</u> "
	9VAC25-32-359 A 2		Add to clarify requirements. New language added: " <u>2. If the pollutant concentrations in 9VAC25-32-356 Table 4 and the Class B pathogen requirements in 9VAC25-32-675</u>

			<u>B are met when bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site."</u>
	9VAC25-32-359 A 2 a		Add to clarify requirements. New language added: <u>"a. The person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:"</u>
	9VAC25-32-359 A 2 a (1)		Add to clarify requirements. New language added: <u>"(1) The concentration of each pollutant listed in Table 4 of 9VAC25-32-356 in the bulk biosolids;"</u>
	9VAC25-32-359 A 2 a (2)		Add to clarify requirements. New language added: <u>"(2) The following statement: "I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in 9VAC25-32-675 B and the vector attraction reduction requirement in (insert one of the vector attraction requirements in 9VAC25-32-685 B 1 through B 8, if one of those requirements is met) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment." and"</u>
	9VAC25-32-359 A 2 a (3)		Add to clarify requirements. New language added: <u>"(3) A description of how the Class B pathogen requirements in 9VAC25-32-675 B are met; and"</u>
	9VAC25-32-359 A 2 a (4)		Add to clarify requirements. New language added: <u>"(4) When one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 is met, a description of how the vector attraction reduction requirement is met."</u>
	9VAC25-32-359 A 2 b		Add to clarify requirements. New language added: <u>"b. The person who applies the bulk biosolids shall develop the following information and shall retain the information for five years:"</u>
	9VAC25-32-359 A 2 b (1)		Add to clarify requirements. New language added: <u>"(1) The following certification statement: "I certify, under penalty of law, that the</u>

			information that will be used to determine compliance with the management practices in 9VAC25-32-560, the site restrictions in 9VAC25-675 B 5, and the vector attraction reduction requirements in (insert either 9VAC25-32-685 B 9 or B 10, if one of those requirements is met) was prepared for each site on which bulk biosolids is applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";
	9VAC25-32-359 A 2 b (2)		Add to clarify requirements. New language added: "(2) A description of how the management practices in 9VAC25-32-560 are met on each site on which bulk biosolids is applied;"
	9VAC25-32-359 A 2 b (3)		Add to clarify requirements. New language added: "(3) A description of how the site restrictions in 9VAC25-32-675 B 5 are met for each site on which bulk biosolids is applied;"
	9VAC25-32-359 A 2 b (4)		Add to clarify requirements. New language added: "(4) When the vector attraction reduction requirement in either 9VAC25-32-685 B 9 or B 10 is met, a description of how the vector attraction reduction requirement is met; and"
	9VAC25-32-359 A 2 b (5)		Add to clarify requirements. New language added: "(5) The date bulk biosolids is applied to each site."
	9VAC25-32-359 A 3		Add to clarify requirements. New language added: "3. If the requirements in 9VAC25-32-356 B 2 are met when bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site:"
	9VAC25-32-359 A 3 a		Add to clarify requirements. New language added: "a. The person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:"
	9VAC25-32-359 A 3 a (1)		Add to clarify requirements. New language added: "(1) The concentration of each pollutant listed in Table 2 of 9VAC25-32-356 in the bulk biosolids;"
	9VAC25-32-359 A		Add to clarify requirements. New language added: "(2) The following certification

	3 a (2)		<p><u>statement:</u> <u>"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in (insert either 9VAC25-32-675 A or B and the vector attraction reduction requirements in (insert one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8, if one of those requirements is met)) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fines and imprisonment."</u></p>
	9VAC25-32-359 A 3 a (3)		<p>Add to clarify requirements. New language added: <u>"(3) A description of how the pathogen requirements in either 9VAC25-32-675 A or B are met; and"</u></p>
	9VAC25-32-359 A 3 a (4)		<p>Add to clarify requirements. New language added: <u>"(4) When one of the vector attraction reduction requirements in 9VAC2532-685 B 1 through B 8 is met, a description of how the vector attraction reduction requirement is met."</u></p>
	9VAC25-32-359 A 3 b		<p>Add to clarify requirements. New language added: <u>"b. The person who applies the bulk biosolids shall develop the following information, retain the information in A 3 b (1) through A 3 b (7) indefinitely, and retain the information in subdivisions A 3 b (8) through A 3 b (13) for five years:"</u></p>
	9VAC25-32-359 A 3 b (1)		<p>Add to clarify requirements. New language added: <u>"(1) The location, by either street address or latitude and longitude, of each site on which bulk biosolids is applied;"</u></p>
	9VAC25-32-359 A 3 b (2)		<p>Add to clarify requirements. New language added: <u>"(2) The number of hectares in each site on which bulk biosolids is applied;"</u></p>
	9VAC25-32-359 A 3 b (3)		<p>Add to clarify requirements. New language added: <u>"(3) The date bulk biosolids is applied to each site;"</u></p>
	9VAC25-32-359 A 3 b (4)		<p>Add to clarify requirements. New language added: <u>"(4) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 3 of 9VAC25-32-356 in the bulk biosolids applied to each site, including the amount</u></p>

			in 9VAC25-32-313 F 2 c;"
	9VAC25-32-359 A 3 b (5)		Add to clarify requirements. New language added: " <u>(5) The amount of biosolids (i.e., dry metric tons) applied to each site;</u> "
	9VAC25-32-359 A 3 b (6)		Add to clarify requirements. New language added: " <u>(6) The following certification statement:</u> <u>"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements to obtain information in 9VAC25-32-313 F 2 was prepared for each site on which bulk biosolids is applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."</u> ;"
	9VAC25-32-359 A 3 b (7)		Add to clarify requirements. New language added: " <u>(7) A description of how the requirements to obtain information in 9VAC25-32-313 F 2 are met;</u> "
	9VAC25-32-359 A 3 b (8)		Add to clarify requirements. New language added: " <u>(8) The following certification statement:</u> <u>"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in 9VAC32-313 B and 9VAC25-32-560 was prepared for each site on which bulk biosolids is applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."</u> ;"
	9VAC25-32-359 A 3 b (9)		Add to clarify requirements. New language added: " <u>(9) A description of how the management practices in 9VAC25-32-569 are met for each site on which bulk biosolids is applied;</u> "
	9VAC25-32-359 A 3 b (10)		Add to clarify requirements. New language added: " <u>(10) The following certification statement when the bulk biosolids meet the Class B pathogen requirements in 9VAC25-32-675 B:</u> <u>"I certify, under penalty of law, that the information that will be used to determine</u>

			<u>compliance with the site restrictions in 9VAC25-32-675 B 5 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fines and imprisonment.</u> ”;
	9VAC25-32-359 A 3 b (11)		Add to clarify requirements. New language added: <u>“(11) A description of how the site restrictions in 9VAC25-32-675 B are met for each site on which Class B bulk biosolids is applied.”</u>
	9VAC25-32-359 A 3 b (12)		Add to clarify requirements. New language added: <u>“(12) The following certification statement when the vector attraction reduction requirement in either 9VAC25-32-685 B 9 or B 10 is met: “I certify, under penalty of law, that the information that will be used to determine compliance with the vector attraction reduction requirement (insert either 9VAC25-32-685 B 9 or B 10) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”; and”</u>
	9VAC25-32-359 A 3 b (13)		Add to clarify requirements. New language added: <u>“(13) If the vector attraction reduction requirements in either 9VAC25-32-685 B 9 or B 10 are met, a description of how the requirements are met.”</u>
	9VAC25-32-359 B		Add to clarify information requirements for domestic septage. New language added: <u>“B. Domestic septage. When domestic septage is applied to agricultural land, forest, or a reclamation site, the person who applies the domestic septage shall develop the following information and shall retain the information for five years:”</u>
	9VAC25-32-359 B 1		Add to clarify information requirements for domestic septage. New language added: <u>“1. The location, by either street address or latitude and longitude, of each site on which domestic septage is applied;”</u>
	9VAC25-		Add to clarify information requirements for

	32-359 B 2		domestic septage. New language added: <u>"2. The number of acres in each site on which domestic septage is applied;"</u>
	9VAC25-32-359 B 3		Add to clarify information requirements for domestic septage. New language added: <u>"3. The date domestic septage is applied to each site;"</u>
	9VAC25-32-359 B 4		Add to clarify information requirements for domestic septage. New language added: <u>"4. The nitrogen and phosphorus requirement for the crop or vegetation grown on each site during the 365-day period;"</u>
	9VAC25-32-359 B 5		Add to clarify information requirements for domestic septage. New language added: <u>"5. The rate, in gallons per acre per 365-day period, at which domestic septage is applied to each site;"</u>
	9VAC25-32-359 B 6		Add to clarify information requirements for domestic septage. New language added: <u>"6. The following certification statement: "I certify, under penalty law, that the information that will be used to determine compliance with the pathogen requirements in (insert either 9VAC25-32-675 C 1 or C 2) and the vector attraction reduction requirements in (insert 9VAC25-32-685 B 9, B 10, or B 12) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";</u> "
	9VAC25-32-359 B 7		Add to clarify information requirements for domestic septage. New language added: <u>"7. A description of how the pathogen requirements in either 9VAC25-32-675 C 1 or C 2 are met; and"</u>
	9VAC25-32-359 B 8		Add to clarify information requirements for domestic septage. New language added: <u>"8. A description of how the vector attraction reduction requirements in 9VAC25-32-685 B 9; B 10 and B 12 are met."</u>
9VAC25-32-360		"Article 2 Operational and Monitoring Requirements"	Article header deleted. Now included as part of new section 9VAC25-32-356.
9VAC25-32-360		"9VAC25-32-360. Monitoring; records;	Section header revised to refer to only "reporting" requirements. Revised to read:

		reporting."	"9VAC25-32-360. Monitoring; records; reporting. Reporting."
9VAC25-32-360		"The board may require the owner or operator of any facility to install, use, and maintain monitoring equipment for internal testing of biosolids..."	General introductory language deleted. Replaced with more specific language to clarify requirements.
	9VAC25-32-360 A		Add consolidated reporting requirements from 9VAC25-32-440. New language added: " <u>A. An activity report shall be submitted (electronically or postmarked) to the department by the 15th day of each month for land application activity that occurred in the previous calendar month unless another date is specified in the permit in accordance with 9VAC25-32-80 I 4. The report shall indicate those sites where land application activities took place during the previous month. If no land application occurs under a permit during the calendar month, a report shall be submitted stating that no land application occurred.</u> "
	9VAC25-32-360 B		Add annual reporting requirement language from the VPDES for clarity. Language added: " <u>B. A report shall be submitted to the department annually on February 19 of each year for the previous calendar year's activity. The report shall include at a minimum:</u> "
	9VAC25-32-360 B 1		Add to specify report content requirements. New language added: " <u>1. The information in 9VAC25-32-359 A, except the information in 9VAC25-32-359 A 1 b, A 2 b and A 3 b, for the appropriate requirements; and</u> "
	9VAC25-32-360 B 2		Add to specify report content requirements. New language added: " <u>2. The information in 9VAC25-32-359 A 3 b (1) through (7) when 90% or more of any of the cumulative pollutant loading rates in Table 3 of 9VAC25-32-356 is reached at a land application site.</u> "
	9VAC25-32-360 C		Add language from 9VAC25-32-440 related to the requirements to maintain the required reports documenting the required treatment and quality characteristics and the maximum allowable land application

			loading rates. Language added: " <u>C. Reports shall be maintained documenting the required treatment and quality characteristics and the maximum allowable land application loading rates established for biosolids use; in addition, operational monitoring results shall verify that required sludge treatment has achieved the specified levels of pathogen control and vector attraction reductions (9VAC25-32-675 and 9VAC25-32-685). Adequate records on biosolids composition, treatment classification, biosolids application rates, and methods of application for each site shall be maintained by the generator and owner.</u> "
	9VAC25-32-360 D		Add language from 9VAC25-32-440 related to the requirement for the generator and the owner to maintain records for a minimum period of five years. Language added: " <u>D. The generator and owner shall maintain the records for a minimum period of five years. Sites receiving frequent applications of biosolids that meet or exceed maximum cumulative constituent loadings and dedicated disposal sites should be properly referenced for future land transactions (Sludge Disposal Site Dedication Form).</u> "
9VAC25-32-370		"9VAC25-32-370. Minimum biosolids sampling and testing program."	Section repealed.
9VAC25-32-380		"9VAC25-32-380. Minimum operational testing and control program."	Section repealed.
9VAC25-32-390		"9VAC25-32-390. Additional monitoring, reporting and recording requirements for land application."	Section repealed. The section that details what must be included in the operations management plan includes these requirements.
9VAC25-32-400		"9VAC25-32-400. Additional monitoring, reporting and recording requirements for sewage sludge and residual solids management."	Revise section header to just refer to "Additional monitoring". Revised to read: "9VAC25-32-400. Additional monitoring, reporting and recording requirements for sewage sludge and residual solids management. "
9VAC25-32-400		"Either the operation and maintenance manual, sludge management plan, or management practices	Delete text. Duplicative language. Same information already contained in 9VAC25-32-410 related to the Operations Management Plan. The recordkeeping

		plan shall contain...that meets either of the following criteria:"	requirements are addressed in 9VAC25-32-359 and the reporting requirements are addressed in 9VAC25-32-360.
9VAC25-32-400 1		"1. Whenever exceptional quality biosolids are marketed..."	Delete text – duplicative language.
9VAC25-32-400 2		"2. Whenever the application site area for biosolids processed by Class I...the necessary vector attraction requirements are met."	Delete text – duplicative language.
9VAC25-32-400 2	9VAC25-32-400 A	"The department may recommend that specified site specific monitoring be performed by the holder of the permit for any biosolids land application practice regardless of frequency of application or size of the application area. Such recommendations will occur in situations in which groundwater contamination, surface runoff, soil toxicity, health hazards or nuisance conditions are identified as an existing problem or documented as a potential problem as a result of biosolids use operations. Requirements of 9VAC25-32-510 through 9VAC25-32-580 shall apply in full whether or not a monitoring waiver provision is applicable."	Add subsection numbering to clarify the requirements. Revised language to clarify requirements. Revised to read: " <u>A.</u> The department may recommend <u>require</u> that specified additional site specific monitoring be performed by the holder of the permit for any biosolids land application practice regardless of frequency of application or size of the application area. Such recommendations will <u>requirements may</u> occur in situations in which groundwater contamination, surface runoff, soil toxicity, health hazards or nuisance conditions are identified as an existing problem or documented as a potential problem as a result of biosolids use operations. Requirements of 9VAC25-32-510 through 9VAC25-32-580 shall apply in full whether or not a monitoring waiver provision is applicable. <u>Additional monitoring may include, but is not limited to groundwater, surface water, crop, and soil monitoring.</u> "
	9VAC25-32-400 B		Add subsection "B" designation. Add text from 9VAC25-32-360. Language added: " <u>B.</u> The board may <u>require the owner or operator of any facility or operation to install, use, and maintain monitoring equipment for internal testing of biosolids quality, to identify and determine the causes of operational problems, and to determine the necessary corrective actions to correct such problems. If this testing is required, test results shall be recorded, compiled, and reported to the department.</u> "

	9VAC25-32-400 C		Add subsection "C" designation. Add text from 9VAC25-32-380 C. Language added: " <u>C. Additional operational control information may be required on an individual basis by the department.</u> "
	9VAC25-32-400 D		Add subsection "D" designation. Add text from 9VAC25-32-600 C. Language added: " <u>D. The department may require biosolids to be tested for certain toxic organic compounds prior to agricultural use. If performed and validated, these test results shall be utilized to evaluate the maximum allowable annual loading rate for the tested biosolids. If analytical test results verify that biosolids contains levels of organic chemicals exceeding concentration limits incorporated in federal regulations or standards, appropriate restrictions shall be imposed for agricultural use of those biosolids.</u> "
	9VAC25-32-400 E	"	Add subsection "E" designation. Add text from original VPA tables 2 B and 2 C. Language added: " <u>E. Additional parameters may be required for screening purposes such as aluminum (mg/kg), water soluble boron (mg/kg), calcium (mg/kg), manganese (mg/kg), sulfates (mg/kg), and those pollutants for which removal credits are granted.</u> "
	9VAC25-32-400.F		Add subsection "F" designation. Add text from original VPA tables 2 B and 2 C. Language added: " <u>F. Microbiological testing may be necessary to document the sludge treatment classification (9VAC25-32-675). Microbiological standards shall be verified by the log mean of the analytical results from testing of seven or more samples of the sludge source. Sampling events shall be separated by an appropriate period of time so as to be representative of the random and cyclic variations in sewage characteristics.</u> "
9VAC25-32-410		"9VAC25-32-410. Operation and maintenance manuals."	Revised based on comments received; confusing with the term operations and maintenance Manual. Change section header to correct terminology. Revised to read: "9VAC25-32-410. Operation and maintenance manuals <u>Biosolids management plan.</u> "
9VAC25-32-410		"A. General. The general	Delete section and replace with

A		purpose of an operation and maintenance manual...while presenting the information in a readily accessible manner."	requirements for the permit holder to maintain a "Biosolids management plan".
	9VAC25-32-410 A		Add to specify requirements related to a "Biosolids Management Plan". New language added: " <u>A. The permit holder shall maintain and implement a Biosolids Management Plan that shall consist of three components:</u> " Clarified that biosolids management plant shall be maintained and implemented.
	9VAC25-32-410 A 1		Add to specify requirements related to a "Biosolids Management Plan". New language added: " <u>1. The materials, including site booklets, developed and submitted at the time of permit application or permit modification adding a farm to the permit in accordance with 9VAC25-32-60 F.</u> "
	9VAC25-32-410 A 2		Add to specify requirements related to a "Biosolids Management Plan". New language added: " <u>2. Nutrient management plan developed for each site prior to biosolids application; and</u> "
	9VAC25-32-410 A 3		Add to specify requirements related to a "Biosolids Management Plan". New language added: " <u>3. Operations and maintenance (O&M) manual, developed and submitted to the department within 90 days of the effective date of the permit.</u> "
9VAC25-32-410 B		"B. Contents. The manual shall contain the testing and reporting elements required by this regulation. In addition, for information and guidance purposes, the manual should contain additional schedules that supplement these required schedules."	Delete subsection. Text revised and expanded upon and included as new subsection "D".
	9VAC25-32-410 B		Added new language: " <u>B. The biosolids management plan and all of its components shall be incorporated as an enforceable part of the permit.</u> " Based on comments from the enforcement division.
	9VAC25-32-410 C		Language moved from 9VAC25-32-560 A 1 a – e. NMP requirements in 560 were all moved to 410 C. to consolidate to one

			location. To clarify requirements for nutrient management plans as they relate to biosolids applications. - Based on comments received. Language added: " <u>C. Nutrient management plan:</u> "
	9VAC25-32-410 C 1		New language added: " <u>1. A nutrient management plan approved by the Department of Conservation and Recreation shall be required for application sites prior to board authorization under specific conditions, including but not limited to:</u> "
	9VAC25-32-410 C 1 a		Added new language: " <u>a. sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;</u> " Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
	9VAC25-32-410 C 1 b		Added new language: " <u>b. sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;</u> " Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
	9VAC25-32-410 C 1 c		Added new language: " <u>c. mined or disturbed land sites where land application is proposed at greater than agronomic rates; and</u> " Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
	9VAC25-32-410 C 1 d		New Language added to be consistent with other sections of the regulation: " <u>d. other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters;</u> "
	9VAC25-32-410 C		New Language added to clarify that approved NMP is needed anytime these

	1 e		conditions exist, not just at the time of permit application. New language added: <u>"e. Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site."</u>
	9VAC25-32-410 C 2		Added new language: <u>"2. The nutrient management plan shall be available for review by the department at the land application site during biosolids land application."</u> Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
	9VAC25-32-410 C 3		Added new language: <u>"3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the nutrient management plan to the farm operator of the site, the Department of Conservation and Recreation and the chief executive officer or designee for the local government, unless they request in writing not to receive the nutrient management plan."</u> Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.
	9VAC25-32-410 C 4		Added new language: <u>"4. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for application sites where the soil test phosphorus levels exceed the values in Table 1 of this section. For purposes of approval, permittees should submit the nutrient management plan to the Department of Conservation and Recreation at least 30 days prior to the anticipated date of land application to ensure adequate time for the approval process."</u> Language moved from 9VAC25-32-560 A 1 and expanded upon to clarify requirements - NMP requirements in 560 were all moved to 410 C. to consolidate to

			one location. - Based on comments received.										
	9VAC25-32-410 C 4 - Table 1		<p>Added new table: "</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>TABLE 1</u> <u>SOIL PHOSPHORUS LEVELS</u> <u>REQUIRING NMP APPROVAL</u></th> </tr> <tr> <th style="text-align: center;"><u>REGION</u></th> <th style="text-align: center;"><u>Soil Test P (ppm)</u> <u>VPI & SU Test</u> <u>(Mehlich I)*</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>Eastern Shore</u> <u>and Lower</u> <u>Coastal Plain</u></td> <td style="text-align: center;"><u>135</u></td> </tr> <tr> <td style="text-align: center;"><u>Middle and</u> <u>Upper Coastal</u> <u>Plain and</u> <u>Piedmont</u></td> <td style="text-align: center;"><u>136</u></td> </tr> <tr> <td style="text-align: center;"><u>Ridge and Valley</u></td> <td style="text-align: center;"><u>162</u></td> </tr> </tbody> </table> <p>The table also includes a footnote that specifies that: "<u>*If results are from another laboratory, the Department of Conservation and Recreation approved conversion factors must be used.</u>" Table moved from 9VAC25-32-560 A 1 - NMP requirements in 560 were all moved to 410 C. to consolidate to one location. - Based on comments received.</p>	<u>TABLE 1</u> <u>SOIL PHOSPHORUS LEVELS</u> <u>REQUIRING NMP APPROVAL</u>		<u>REGION</u>	<u>Soil Test P (ppm)</u> <u>VPI & SU Test</u> <u>(Mehlich I)*</u>	<u>Eastern Shore</u> <u>and Lower</u> <u>Coastal Plain</u>	<u>135</u>	<u>Middle and</u> <u>Upper Coastal</u> <u>Plain and</u> <u>Piedmont</u>	<u>136</u>	<u>Ridge and Valley</u>	<u>162</u>
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9VAC25-32-410 B	9VAC25-32-410 D	"B. Contents. The manual shall contain the testing and reporting elements required by this regulation. In addition, for information and guidance purposes, the manual should contain additional schedules that supplement these required schedules."	Moved the original language from "B" to a new subdivision "D". Revised and reorganized to clarify requirements. Subdivision now reads: " <u>D. The O&M manual shall include at a minimum:</u> "										
	9VAC25-32-410 D 1		Add to clarify requirements: " <u>1. Equipment maintenance and calibration procedures and schedules:</u> "										
	9VAC25-32-410 D 2		Add to clarify requirements: " <u>2. Storage facility maintenance procedures and schedules:</u> "										
	9VAC25-32-410 D 3		Add to clarify requirements: " <u>3. Sampling schedules for:</u> "										
	9VAC25-32-410 D 3 a		Add to clarify requirements: " <u>a. Required monitoring; and</u> "										

	9VAC25-32-410 D 3 b		Add to clarify requirements: " <u>b. Operational control testing;</u> "
	9VAC25-32-410 D 4		Add to clarify requirements: " <u>4. Sample collection, preservation, and analysis procedures, including laboratories and methods used; and</u> "
	9VAC25-32-410 D 5		Add to clarify requirements: " <u>5. Instructions for recording and reporting of all monitoring activities.</u> "
	9VAC25-32-420 A	"Independently operated essential equipment, or components, of biosolids use facilities, including treatment works, shall be provided with sufficient capacity and routine maintenance resources so that the average quantity of biosolids used may be reliably transported, stored, treated, or otherwise managed in accordance with permit requirements. Permit noncompliance shall be prevented in those situations in which the largest component is out of service."	Add subsection "A" designation and revise text to clarify requirements. Delete unnecessary language. Revised to read: " <u>A. Independently operated essential equipment, or components, of biosolids use facilities and operations,</u> including treatment works, shall be provided with sufficient capacity and routine maintenance resources so that the average quantity of biosolids used may be reliably transported, stored, treated, or otherwise managed in accordance with permit requirements. Permit noncompliance shall be prevented in those situations in which the largest component is out of service. "
	9VAC25-32-420 B	"The need for spare parts should be determined from operational experience, evaluation of past maintenance requirements, etc. A spare parts inventory may be included in the operation and maintenance manual. The inventory should list the minimum and maximum quantities of the spare parts to be kept on hand, the equipment in which they are used, their storage location, replacement procedures and other pertinent information."	Add subsection "B" designation for clarification of requirements. Grammatical corrections and language changed to reflect the mandatory nature of the requirements. Statement related to what the inventory of spare parts should include deleted – statement suitable for inclusion in guidance. Revised to read: " <u>B. The need for spare parts shall be determined from operational experience, and</u> evaluation of past maintenance requirements, etc. A spare parts inventory may be included in the operation and maintenance manual. The inventory should list the minimum and maximum quantities of the spare parts to be kept on hand, the equipment in which they are used, their storage location, replacement procedures and other pertinent information. "
	9VAC25-32-420 C	"Sufficient spare parts determined as necessary to	Add subsection "C" designation. Revise existing text to reflect the mandatory nature

		ensure continuous operability of essential unit operations and equipment should be either located at the treatment works or at readily accessible locations. The minimum quantities of spare parts actually provided shall be in accordance with the operation and maintenance manual."	of the requirements. Revised to read: " <u>C.</u> Sufficient spare parts determined as necessary to ensure continuous operability of essential unit operations and equipment should <u>shall</u> be either located at the treatment works or at readily accessible locations. The minimum quantities of spare parts actually provided shall be in accordance with the operation and maintenance manual."
9VAC25-32-440		"9VAC25-32-450. Biosolids monitoring/reporting."	Section repealed.
9VAC25-32-450		"9VAC25-32-450. Sampling."	Change section heading to: "9VAC25-32-450. <u>Sampling, analysis and preservation.</u> " Revised to more accurately reflect the section materials and to clarify section requirements.
9VAC25-32-450 A		"A. General. The sampling procedures and protocols used...These adjusted grab samples can then be added to form a composite sample."	Delete text. Transfer general descriptive language to guidance. Replace with specific language to clarify requirements.
	9VAC25-32-450 A		Add to clarify requirements. New language added: " <u>A. Representative samples of biosolids that is applied to the land or placed on a surface disposal site shall be collected and analyzed.</u> "
	9VAC25-32-450 A 1		Add to clarify requirements. New language added: " <u>1. Raw sewage or sludge samples are to be collected prior to the treatment process unit operations.</u> "
	9VAC25-32-450 A 2		Add to clarify requirements. New language added: " <u>2. Final treated samples are to be taken at a point following appropriate unit operations in the treatment process. An evaluation of biosolids treatment may require monitoring of fecal coliform levels in treated biosolids.</u> "
	9VAC25-32-450 A 3		Add to clarify requirements. New language added: " <u>3. Composite samples shall be collected in accordance with the treatment works operations and maintenance manual.</u> "
9VAC25-32-450 B		"B. Liquid sludge. In the case of digesters and liquid storage holding tanks..."	Replace the term "sludge" with "biosolids" for consistency of terminology. Revised to read: "B. Liquid sludge <u>biosolids</u> . In the case of digesters and liquid storage holding

<p>9VAC25-32-450 C</p>		<p>"C. Biosolids storage facilities. Equal volumes of biosolids should be withdrawn from random locations across the width and throughout the length of the storage facility at the surface, mid-depth and near the bottom of the lagoon at each grab sample location. These grab samples should be added to form a composite mix. A range of the recommended minimum number of grab samples that should be obtained from various sizes of sludge lagoons in order to obtain a representative composite sample is:</p> <table border="1"> <thead> <tr> <th rowspan="2">Lagoon Surface Area (Acres)</th> <th colspan="2">Minimum Number of Grab Samples</th> </tr> <tr> <th>Depth less than 4 feet</th> <th>Depth greater than 4 feet</th> </tr> </thead> <tbody> <tr> <td>1 to 9.99</td> <td>4 to 5</td> <td>6 to 8</td> </tr> <tr> <td>10 or more</td> <td>6 to 8</td> <td>9 to 11</td> </tr> </tbody> </table>	Lagoon Surface Area (Acres)	Minimum Number of Grab Samples		Depth less than 4 feet	Depth greater than 4 feet	1 to 9.99	4 to 5	6 to 8	10 or more	6 to 8	9 to 11	<p>tanks..."</p> <p>Revise to reflect the mandatory nature of the requirements and to make the specifications generic to all storage facilities. Add reference to "grab sample table". Revised to read: "C. Biosolids storage facilities. Equal volumes of biosolids should<u>shall</u> be withdrawn from random locations across the width and throughout the length of the storage facility at the surface, mid-depth and near the bottom of the lagoon at each grab sample location. These grab samples should<u>shall</u> be added to form a composite mix. A range of the recommended minimum number of grab samples that should be obtained from various sizes of sludge lagoons<u>biosolids storage facilities</u> in order to obtain a representative composite sample is presented in Table 1 of this section:</p> <table border="1"> <thead> <tr> <th colspan="3">TABLE 1 MINIMUM NUMBER OF GRAB SAMPLES FROM STORAGE FACILITIES</th> </tr> <tr> <th rowspan="2">Lagoon Surface Area (Acres)</th> <th colspan="2">Minimum Number of Grab Samples</th> </tr> <tr> <th>Depth less than 4 feet</th> <th>Depth greater than 4 feet</th> </tr> </thead> <tbody> <tr> <td>1 to 9.99</td> <td>4 to 5</td> <td>6 to 8</td> </tr> <tr> <td>10 or more</td> <td>6 to 8</td> <td>9 to 11</td> </tr> </tbody> </table>	TABLE 1 MINIMUM NUMBER OF GRAB SAMPLES FROM STORAGE FACILITIES			Lagoon Surface Area (Acres)	Minimum Number of Grab Samples		Depth less than 4 feet	Depth greater than 4 feet	1 to 9.99	4 to 5	6 to 8	10 or more	6 to 8	9 to 11
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<p>9VAC25-32-450 D</p>		<p>"D. Dewatered sludge...Centrifuged sludge samples...Filter cake sludge samples..."</p>	<p>Replace term "sludge" with the term "biosolids" for consistent use of terminology. Revised to read: "D. Dewatered sludge<u>biosolids</u>...Centrifuged sludge<u>biosolids</u> samples...Filter cake sludge<u>biosolids</u> samples..."</p>																									
<p>9VAC25-32-450 E</p>		<p>"E. Compost sampling. Composite samples are preferred so that a representative average level of compost characteristics can be obtained from analytical</p>	<p>Revise to clarify. Revised to read: "E. Compost sampling. <u>Collect composite</u> samples are preferred <u>composed of at least three grab samples of 1 kilogram or more</u> so that a representative average level of compost characteristics can be obtained from analytical testing.</p>																									

		testing. Although the compost materials has been subjected to premixing, some variation in quality may exist and at least three grab samples of one kilogram or more should be taken of each mixture and combined to form a composite samples of that mixture. This mixture should be used for analytical testing or for combination with other composites to obtain a total composite sample representing a fixed period of operation. Compost samples may be taken with a scoop or shovel and placed in flexible bags that can be thoroughly shaken to mix grab samples."	Although the compost materials has been subjected to premixing, some variation in quality may exist and at least three grab samples of one kilogram or more should be taken of each mixture and combined to form a composite samples of that mixture. This mixture should be used for analytical testing or for combination with other composites to obtain a total composite sample representing a fixed period of operation. Compost samples may be taken with a scoop or shovel and placed in flexible bags that can be thoroughly shaken to mix grab samples."
9VAC25-32-450 F		"F. Analysis and preservation of samples. In general, sludge samples should be refrigerated at approximately 4°C...Analytical procedures should be updated as needed."	Delete current section language and insert language from VPDES for consistency between regulations and to provide reference to VPDES 9VAC25-31-490. New language added: "F. Analysis and preservation of samples. In general, sludge samples should be refrigerated at approximately 4°C...Analytical procedures should be updated as needed. <u>Biosolids samples shall be preserved and analyzed in accordance with methods listed in 40 CFR Part 136 (2007) and methods identified in 9VAC25-31-490. Calculation procedures in the methods shall be used to calculate the percent volatile solids reduction for biosolids. Any other acceptable test procedure not listed in 40 CFR Part 136 (2007) shall be specified in the VPA permit.</u> "
9VAC25-32-460		"9VAC25-32-460. Soils monitoring and reporting."	Revise section header to read: "9VAC25-32-460. Soils monitoring and reporting. "
9VAC25-32-460	9VAC25-32-460 A	"Soil should be sampled and analyzed prior to sludge application to determine site suitability and to provide background data. After the land	Change language from "should" to "shall" to reflect the mandatory nature of the requirements. Correct terminology – replace "sludge" with "biosolids" Revise language to clarify requirements. Revised to read: " <u>A. Soil should shall be sampled</u>

		<p>application program is underway, it may be necessary to continue monitoring possible changes in the soil characteristics of the application site. Reduced monitoring will usually apply for typical agricultural utilization projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (see Table 5). Reduced monitoring may also apply to one time sludge applications to forest or reclaimed lands. For background analysis, random composite samples from the zone of incorporation is required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre)."</p>	<p>and analyzed prior to sludge-biosolids application to determine site suitability and to provide background data. After the land application program is underway, it may be necessary to continue monitoring possible changes in the soil characteristics of the application site. Reduced monitoring will usually apply for typical agricultural utilization projects where biosolids are applied to farmland at or below agronomic rates or on an infrequent basis (see Table 5). <u>No sample analysis used to determine application rates shall be more than 3 years old at the time of biosolids land application. Soil shall be sampled and analyzed in accordance with Table 1 of this section.</u> Reduced monitoring may also apply to one time sludge-biosolids applications to forest or reclaimed lands. For background analysis, random composite samples from the zone of incorporation is required for infrequent applications and frequent applications at less than agronomic rates (total less than 15 dry tons per acre)."</p>																										
	<p>9VAC25-32-460 A Table 1</p>		<p>Insert new Table 1 to specify soil test parameters for land application sites. New table added:</p> <table border="1"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>TABLE 1</u> <u>SOIL TEST PARAMETERS FOR</u> <u>LAND APPLICATION SITES¹</u></th> </tr> <tr> <th colspan="2" style="text-align: center;"><u>Parameter</u></th> </tr> </thead> <tbody> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"><u>Soil pH (std. Units)</u></td> </tr> <tr> <td></td> <td><u>Available phosphorus (ppm)²</u></td> </tr> <tr> <td></td> <td><u>Extractable potassium (ppm)</u></td> </tr> <tr> <td></td> <td><u>Extractable sodium (mg/100g)³</u></td> </tr> <tr> <td></td> <td><u>Extractable calcium (mg/100g)</u></td> </tr> <tr> <td></td> <td><u>Extractable magnesium (mg/100g)</u></td> </tr> <tr> <td></td> <td><u>Zinc (ppm)</u></td> </tr> <tr> <td></td> <td><u>Manganese (ppm)</u></td> </tr> <tr> <td colspan="2">¹<u>Note: Unless otherwise stated, analyses shall be reported in a dry weight basis.</u></td> </tr> <tr> <td colspan="2">²<u>Available P shall be analyzed using one of the following methods: Mehlich I or Mehlich III.</u></td> </tr> <tr> <td colspan="2">³<u>Extractable sodium shall be</u></td> </tr> </tbody> </table>	<u>TABLE 1</u> <u>SOIL TEST PARAMETERS FOR</u> <u>LAND APPLICATION SITES¹</u>		<u>Parameter</u>			<u>Soil pH (std. Units)</u>		<u>Available phosphorus (ppm)²</u>		<u>Extractable potassium (ppm)</u>		<u>Extractable sodium (mg/100g)³</u>		<u>Extractable calcium (mg/100g)</u>		<u>Extractable magnesium (mg/100g)</u>		<u>Zinc (ppm)</u>		<u>Manganese (ppm)</u>	¹ <u>Note: Unless otherwise stated, analyses shall be reported in a dry weight basis.</u>		² <u>Available P shall be analyzed using one of the following methods: Mehlich I or Mehlich III.</u>		³ <u>Extractable sodium shall be</u>	
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			<u>analyzed only where biosolids known to be high in sodium will be land applied.</u>
9VAC25-32-460		"Generally, one subsample per acre should be taken for application sites of 10 acres or more...Records of soil analysis must be maintained by the owner and submitted as required."	Delete general statement to clarify regulations.
	9VAC25-32-460 B		Add new subsection "B" for clarification of requirements. New language added: " <u>B. The permit applicant or permit holder may be require to conduct soil testing and analysis of additional parameters, as determined by the department, based on site-specific history or conditions.</u> "
	9VAC25-32-460 C		Add new subsection "C" to address sample collection. New language added: " <u>C. Samples shall be collected in accordance with § 10.1-104.2 of the Code of Virginia.</u> "
9VAC25-32-480 A		"A. Monitoring wells may be required by the board as recommended by the department for land treatment sites, sludge lagoons, or sludge holding facilities to monitor groundwater quality. The wells should be designed and located to meet specific geologic and hydrologic conditions...a driller's log shall be submitted to the department."	Revise to clarify requirements and to correct terminology. Delete "well design" specifications and driller's log requirements. Revised to read: "A. Monitoring wells may be required by the board as recommended by the department for land treatment sites, sludge lagoons, or sludge holding biosolids land application sites, or biosolids storage facilities to monitor groundwater quality. The wells should be designed and located to meet specific geologic and hydrologic conditions...a driller's log shall be submitted to the department. "
9VAC25-32-480 B		"B. Sampling procedures must assure maintenance of sample integrity...Additional test parameters may be required on a case-by-case basis."	Sampling specifications deleted. Language revised to include requirement for a groundwater monitoring plan. Revised to read: "B. Sampling procedures must assure maintenance of sample integrity...Additional test parameters may be required on a case-by-case basis. If groundwater monitoring is required, a groundwater monitoring plan shall be submitted to the department for approval that includes at a minimum:"
	9VAC25-		Add to specify minimum requirements for

	32-480 B 1		an approvable groundwater monitoring plan. New language added: " <u>1. Geologic and hydrologic conditions at the site;</u> "
	9VAC25-32-480 B 2		Add to specify minimum requirements for an approvable groundwater monitoring plan. New language added: " <u>2. Monitoring well design, placement, and construction;</u> "
	9VAC25-32-480 B 3		Add to specify minimum requirements for an approvable groundwater monitoring plan. New language added: " <u>3. Sampling frequency;</u> "
	9VAC25-32-480 B 4		Add to specify minimum requirements for an approvable groundwater monitoring plan. New language added: " <u>4. Sampling procedures, including quality assurance and quality control; and</u> "
	9VAC25-32-480 B 5		Add to specify minimum requirements for an approvable groundwater monitoring plan. New language added: " <u>5. Collection of background samples.</u> "
9VAC25-32-480 C		"C. Sample analysis and preservation techniques...Wastewater."	Delete subsection.
9VAC25-32-480 C		"Table 2 PARAMETERS FOR BIOSOLIDS ANALYSIS"	Table 2 and associated text deleted from this section.
9VAC25-32-480 C		"Table 3 STANDARDS FOR DOCUMENTATION OF PATHOGEN CONTROL AND VECTOR ATTRACTION REDUCTION LEVELS FOR BIOSOLIDS"	Table 3 and associated text deleted from this section.
9VAC25-32-480 C		"Table 4 EXAMPLE OF REPORT FOR SUBMISSION TO FIELD OFFICES"	Table 4 deleted from this section.
9VAC25-32-480 C		"Table 5 RECOMMENDED SOIL TEST PARAMETERS FOR LAND APPLICATION SITES"	Table 5 deleted from this section.
9VAC25-32-480 C		"Table 6 SUGGESTED GROUNDWATER MONITORING PARAMETERS AND MONITORING FREQUENCY"	Table 6 deleted from this section.
9VAC25-32-490		"Guidelines set forth in 9VAC25-32-500 through 9VAC25-32-660 of this	Revise section references. Revised to read: "Guidelines set forth in 9VAC25-32-500 <u>9VAC25-32-515</u> through 9VAC25-32-

		regulation specify minimum standards for biosolids use for land application..."	660-9VAC25-32-580 of this regulation specify minimum standards for biosolids use for land application..." Added section to regulatory action as a result of other changes in the regulations that required clarification of this section. Section references revised due to repealing 9VAC25-32-500 and to provide clarification of pertinent sections of the regulations specifying the minimum standards for biosolids use for land application.
9VAC25-32-490		"Guidelines set forth...However, the board may impose standards and requirements that are more stringent than those contained in this regulation when required to protect public health or prevent nuisance conditions from developing either within critical areas, or when special conditions develop prior to or during biosolids use operations. Conformance to local land use..."	Deleted language and inserted specific section references. Revised to read: "Guidelines set forth...However, the board may impose standards and requirements that are more stringent than those contained in this regulation when required to protect public health or prevent nuisance conditions from developing either within critical areas, or when special conditions develop prior to or during biosolids use operations. <u>according to the provisions of 9VAC25-32-100 E, 9VAC25-32-315, and 9VAC25-32-560 B 3.</u> Conformance to local land use..." Revised to be consistent with changes made in the regulations and to clarify requirements.
9VAC25-32-490		"...Justification for biosolid use proposals..."	Replace "biosolid" with "biosolids". Revised to use consistent terminology throughout the regulations. Revised to read: "...Justification for biosolid <u>biosolids use</u> proposals..."
9VAC25-32-500		"Biosolids management.	Repeal section. All components of biosolids management are covered more clearly in 9VAC25-32-410. Revised to eliminate redundancy and to clarify the requirements.
9VAC25-32-510		"9VAC25-32-510. General biosolids use standards."	Repeal section.
	9VAC25-32-515		Add new section to address notification requirements. New language added: " <u>9VAC25-32-515. Notification of land application activity.</u> "
	9VAC25-32-515 A		Add new subsection regarding "written notification". New language added: " <u>A. Written notification.</u> "
	9VAV25-32-515 A 1	"	Added to clarify requirements for written notification. New language added: " <u>1. At least 100 days prior to commencing the</u>

		<p><u>first land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the chief executive officer or designee for the local government where the site is located. This requirement may be satisfied by the department's notice to the local government at the time of receiving the permit application if all necessary information is included in the notice or by providing a list of available permitted sites in the locality at least 100 days prior to commencing the application at any site on the list. If the site is located in more than one county, the information shall be provided to all jurisdictions where the site is located.</u>" Based on TAC discussions and comments received and may provide longer notice since the permit processing time may be up to 180 days.</p>
	<p>9VAV25-32-515 A 2</p>	<p>Added requirement based on statutory language. Based on TAC discussions and comments received. New language added: <u>"2. At least 14 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located unless they request in writing not to receive the notice. The notice shall identify the location of the permitted site and the expected sources of the biosolids to be applied to the site."</u></p>
	<p>9VAV25-32-515 A 3</p>	<p>New language added to clarify requirements: <u>"3. Not more than 24 hours prior to commencing land application activities, including delivery of biosolids to a permitted site, the permittee shall notify in writing the department and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. This notification shall include identification of the biosolids source and shall include only sites where land application activities will commence within 24 hours or where biosolids will be staged within 24 hours."</u> Based on comments received and on TAC discussions.</p>

	9VAC25-32-515 B		Add new subsection addressing requirements for posting of signs. New language added: " <u>B. Posting of signs.</u> "
	9VAC25-32-515 B 1		Added new subdivision to specify sign requirements. New language added: " <u>1. At least five business days prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post signs at the site that comply with this section, are visible and legible from the public right-of-way in both directions of travel, and conform to the specifications herein. The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site.</u> " Added to conform to public access restrictions. Based on SWCB actions.
	9VAC25-32-515 B 1 a		Added new requirement as item "a". New language reads: " <u>a. A sign shall be posted at or near the intersection of the public right-of-way and the main site access road or driveway to the site used by biosolids transport vehicles.</u> " Based on comments received.
	9VAC25-32-515 B 1 b		Added new requirement as item "b": New language reads: " <u>b. If the field is located adjacent to a public right-of-way, at least one sign shall be posted along each public road frontage beside the field to be land applied.</u> " Based on comments received.
	9VAC25-32-515 B 1 c		Added new requirement as item "c". New language reads: " <u>c. The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or where requirements conflict with local government ordinances and other requirements regulating the use of signs.</u> " Based on comments received.
	9VAC25-32-515 B 2		Added new requirement: " <u>2. Upon the posting of signs at a land application site prior to commencing land application, the permittee shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located, unless they request in writing not to receive the notice. Notification shall be delivered to the</u>

		<p>department within 24 hours of the <u>posting of signs. The notice shall include the following:</u></p> <ul style="list-style-type: none"> <u>a. The name and telephone number of the permit holder, including the name of a representative knowledgeable of the permit;</u> <u>b. Identification by tax map number and the DEQ control number for sites on which land application is to take place;</u> <u>c. The name or title and telephone number of at least one individual designated by the permit holder to respond to questions and complaints related to the land application project, if not the permit holder identified in 9VAC25-32-515 B 2 a;</u> <u>d. The approximate dates on which land application is to begin and end at the site; and</u> <u>e. The name, address and telephone number of the wastewater treatment facility, or facilities, from which the biosolids will originate, including the name or title of a representative of the treatment facility that is knowledgeable about the land application operation."</u> Language moved from the 14 day notification requirements and revised based on comments received.
	<p>9VAC25-32-515 B 3</p>	<p>New language added to clarify requirements: "<u>3. The sign shall be made of weather-resistant materials and shall be sturdily mounted so as to be capable of remaining in place and legible throughout the period that the sign is required at the site. Signs required by this section shall be temporary, nonilluminated, and four square feet or more in area, and only contain the following information:</u></p> <ul style="list-style-type: none"> <u>a. A statement that biosolids are being land applied at the site;</u> <u>b. The name of the permit holder;</u> <u>c. The telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and</u> <u>d. Contact information for the department, including a telephone number for complaints and inquiries."</u>
	<p>9VAC25-32-515 B 4</p>	<p>New language added to clarify requirements: "<u>4. The permit holder shall make a good faith effort to replace or repair</u></p>

			<u>any sign that has been removed from a land application site or that has been damaged so as to render any of its required information illegible prior to five business days after completion of land application."</u>
	9VAC25-32-515 C		Add new subsection to address "complaints". New language added: " <u>C. Handling of complaints."</u>
	9VAC25-32-515 C 1		New language added to clarify requirements: " <u>1. Within 24 hours of receiving notification of a complaint, the permit holder shall commence investigation of said complaint and shall determine whether the complaint is substantive. The permit holder shall confirm receipt of all substantive complaints by phone, email, or facsimile to the department, the chief executive officer or his designee for the local government of the jurisdiction in which the complaint originates, and the owner of the treatment facility from which the biosolids originated within 24 hours after receiving the complaint."</u>
	9VAC25-32-515 C 2		New language added to clarify requirements: " <u>2. For purposes of this section, a substantive complaint shall be deemed to be any complaint alleging a violation of these regulations, state law, or local ordinance; a release of biosolids to state waters or to a public right-of-way or to any location not authorized in the permit; or failure to comply with the nutrient management plan for the land application site."</u>
	9VAC25-32-515 C 3		New language added to clarify requirements: " <u>3. Localities receiving complaints concerning land application of biosolids shall notify the department and the permit holder within 24 hours of receiving the complaint."</u>
9VAC25-32-520		"9VAC25-32-520. Sludge quality and composition."	Section repealed. Requirements already addressed in 9VAC25-32-450.
9VAC25-32-530		"9VAC25-32-530. Land acquisition and management control."	Revise section header to read: "9VAC25-32-530. Land acquisition and management control. "
9VAC25-32-530 A		"A. When land application of sludge is proposed, the continued availability of the land and protection from	Revise to clarify requirements. Delete "written agreement" language – that requirement moved to new subsection 9VAC25-32-530 B. Revised to read: "A.

		improper concurrent use during the utilization period shall be assured. A written agreement shall be established...Site specific information shall be provided as part of the sludge management or management practices plan."	When <u>an application to permit land application of sludge biosolids is proposed, submitted to the department, the permit applicant shall ensure</u> the continued availability of the land and protection from improper concurrent use during the utilization period shall be assured. A written agreement shall be established...Site specific information shall be provided as part of the sludge management or management practices plan."
	9VAC25-32-530 B		Add new subsection designation "B". New language added: " <u>B. Land acquisition requirements.</u> "
	9VAC25-32-530 B 1		Add to clarify requirements for land acquisition. New language added: " <u>1. Permit holders shall use a unique control number assigned by the department as an identifier for fields permitted for land application.</u> "
	9VAC25-32-530 B 2		Add to clarify requirements for land acquisition. New language added: " <u>2. A written agreement shall be established between the landowner and permit applicant or permit holder to be submitted with the permit application, whereby the landowner shall consent to apply biosolids on his property. The landowner agreement shall include:</u> " Based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (a)		Added new requirement: " <u>(a) A statement certifying that the landowner is the sole owner or one of multiple owners of the property or properties identified on the landowner agreement;</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (b)		Added new requirement: " <u>(b) A statement certifying that no concurrent agreements are in effect for the fields to be permitted for biosolids application.</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (c)		Added new requirement: " <u>(c) An acknowledgement that the landowner shall notify the permittee when land is sold or ownership is transferred;</u> " Revisions based on comments received and on SWCB request.

	9VAC25-32-530 B 2 (d)		Added new requirement: " <u>(d) An acknowledgement that the landowner shall notify the permittee if any conditions changes such that any component of the landowner agreement becomes invalid;</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (e)		Added new requirement: " <u>(e)Permission to allow department staff on the landowner's property to conduct inspections;</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (f)		Added new requirement: " <u>(f) An acknowledgement by the landowner of any site restrictions identified in the regulation;</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (g)		Added new requirement: " <u>(g) An acknowledgement that the landowner has received a biosolids fact sheet approved by the department; and</u> " Revisions based on comments received and on SWCB request.
	9VAC25-32-530 B 2 (h)		Added new requirement based on SWCB actions. New language added: " <u>(h) An acknowledgement that the landowner shall not remove notifications signs placed by the permit holder.</u> "
	9VAC25-32-530 B 3		Added language to clarify requirements. New language added: " <u>3. New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids.</u> " Based on comments received and on SWCB request.
	9VAC25-32-530 B 4		Added new subdivision B 4: " <u>4. For permits modified in order to incorporate changes to this regulation, the permit holder shall, within 60 days of the effective date of the permit modification, advise the landowner by certified letter of the requirement to provide a new landowner agreement. The letter shall include instructions to the landowner for signing and returning the new landowner agreement, and shall advise the landowner that the permit holder's receipt of such new landowner</u>

			<p><u>agreement is required prior to application of biosolids to the landowner's property.</u>"</p> <p>Based on comments received and on SWCB request. Use of "certified" maintains consistent language with the type of mail service required in the final regulation in the financial responsibility sections. Certified mail is consistent with the type of service required to mail out permits, consistent with the regulatory requirements for CAFOs to file certain notices; and there is no place in any other DEQ statute or other regulations that require anything beyond certified mail.</p>
	9VAC25-32-530 B 5	Part of 9VAC25-32-530 B 2: "The responsibility for obtaining and maintaining the agreements lies with the permit holder. The written agreement shall be submitted to the department with the permit application."	Renumbered and included as new 9VAC25-32-530 B 5. Reorganized to clarify requirements. Language added: " <u>5. The responsibility for obtaining and maintaining the agreements lies with the permit holder. The written agreement shall be submitted to the department with the permit application.</u> "
9VAC25-32-530 B		"B. At least 48 hours prior to delivery of biosolids for land application on any site permitted under this regulation, the permit holder shall post a sign..."	Delete subsection. Requirement now addressed in 9VAC25-32-510 B 1.
9VAC25-32-530 C		"C. The sign shall be made of weather resistant materials..."	Delete subsection. Requirements now addressed and specified in 9VAC25-32-510 B 2.
9VAC25-32-530 C 1		"1. A statement that biosolids are being land applied..."	Delete subdivision. Requirements now addressed and specified in 9VAC25-32-510 B 2 a.
9VAC25-32-530 C 2		"2. The name and telephone number of the permit holder..."	Delete subdivision. Requirements now addressed and specified in 9VAC25-32-510 B 2 b.
9VAC25-32-530 C 3		"3. Contact information..."	Delete subdivision. Requirements now addressed and specified in 9VAC25-32-510 B 2 c.
9VAC25-32-530 D		"D. The permit holder shall promptly replace or repair any sign that has been removed..."	Delete subsection. Requirements now addressed and specified in 9VAC25-32-510 B 3.
9VAC25-32-540 A		Transport. "A. Transport routes should follow primary highways, should avoid residential areas	Replaced "should" with "shall" where necessary to reflect the mandatory nature of the requirements. Revised terminology to replace the term "sludge" with

		<p>when possible, and should comply with all Virginia Department of Transportation requirements and standards. Transport vehicles shall be sufficiently sealed to prevent leakage and spillage of sludge. For sludges with a solids content of less than 15%, totally closed watertight transport vehicles with rigid tops shall be provided to prevent spillage unless adequate justification is provided to demonstrate that such controls are unnecessary. The board may also require certain dewatered sludges exceeding 15% solids content to be handled as liquid sludges. The minimum information for sludge transport that shall be supplied in the sludge operations management plan is listed in 9VAC25-32-670 and 9VAC25-32-680."</p>	<p>"biosolids". Revised to delete the term "operations". Corrected section references. Revised to read: "A. Transport routes should follow primary highways, should <u>shall</u> avoid residential areas when possible, and should <u>shall</u> comply with all Virginia Department of Transportation requirements and standards. Transport vehicles shall be sufficiently sealed to prevent leakage and spillage of sludge <u>biosolids</u>. For sludges <u>biosolids</u> with a solids content of less than 15%, totally closed watertight transport vehicles with rigid tops shall be provided to prevent spillage unless adequate justification is provided to demonstrate that such controls are unnecessary. The board may also require certain dewatered sludges <u>biosolids</u> exceeding 15% solids content to be handled as liquid sludges <u>biosolids</u>. The minimum information for sludge <u>biosolids</u> transport that shall be supplied in the sludge operations <u>biosolids</u> management plan is listed in 9VAC25-32-670 and 9VAC25-32-680 <u>9VAC25-32-60 E</u>."</p>
9VAC25-32-540 B		<p>"B. The permit holder shall be responsible for the prompt cleanup and removal of biosolids spilled during transport to the land application site or to or from a storage facility. The operations manual..."</p>	<p>Revise – the destination is irrelevant to spillage. Revised to read: "B. The permit holder shall be responsible for the prompt cleanup and removal of biosolids spilled during transport to the land application site or to or from a storage facility. The operations manual..."</p>
9VAC25-32-540 D		<p>"D. The permit holder shall promptly report offsite spills to the Virginia Department of Health, the chief..."</p>	<p>Replaced "Virginia Department of Health" with "department" to refer to the Virginia Department of Environmental Quality. Revised to read: "D. The permit holder shall promptly report offsite spills to the Virginia Department of Health <u>department</u>, the chief..." Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.</p>
9VAC25-32-540 D		<p>E. A written report, which shall include a description</p>	<p>Replaced "Virginia Department of Health" with "department" to refer to the Virginia</p>

		of measures taken in response to the spill, shall be submitted to the Virginia Department of Health, the chief..."	Department of Environmental Quality. Revised to read: "E. A written report, which shall include a description of measures taken in response to the spill, shall be submitted to the <u>Virginia Department of Health department</u> , the chief..." Revised to use consistent terminology throughout the regulations. Based on discussions with the AG's Office.
	9VAC25-32-545		Added new section to clarify the requirements for staging. New language added: " <u>9VAC25-32-545. Staging of biosolids for land application.</u> "
	9VAC25-32-545 A		Added to clarify requirements for staging. New language added: " <u>A. Staging is the placement of biosolids on a permitted land application field, within the land application area, in preparation for commencing land application or during an ongoing application, at the field or an adjacent permitted field. Staging is not considered storage and shall not take the place of storage.</u> " Based on comments received. Needed to provide a definition of staging.
	9VAC25-32-545 B		Added to clarify requirements for staging. New language added: " <u>B. Staging requirements.</u> "
	9VAC25-32-545 B 1		Added to clarify requirements for staging. New language added: " <u>1. Staging of biosolids shall not commence unless the field meets the requirements for land application in accordance with Part IX of this regulation and field conditions are favorable for land application.</u> "
	9VAC25-32-545 B 2		Added to clarify requirements for staging. New language added: " <u>2. Biosolids may be staged for up to seven days from the first day biosolids are offloaded onto the staging area, with the following exceptions:</u> "
	9VAC25-32-545 B 2 a		Added to clarify requirements for staging. New language added: " <u>a. In areas of Karst topography, biosolids offloaded at a permitted land application field shall be land applied by the end of the business day.</u> "
	9VAC25-32-545 B 2 b		Added to clarify requirements for staging. New language added: " <u>b. In areas identified in the USDA soil survey as</u>

			<u>frequently flooded, biosolids offloaded at a permitted land application field shall be land applied by the end of the business day."</u>
	9VAC25-32-545 B 2 c		Added to clarify requirements for staging. New language added: " <u>c. Biosolids shall not be staged overnight on sites that have on-site storage.</u> "
	9VAC25-32-545 B 3		Added to clarify requirements for staging. New language added: " <u>3. If staged biosolids cannot be spread by the end of the seventh day of staging, the permittee shall take the following actions:</u> " Based on comment that 14 days was too long. 7 days is adequate considering currently biosolids cannot be staged overnight except in emergency situations.
	9VAC25-32-545 B 3 a		Added to clarify requirements for staging. New language added: " <u>a. Biosolids shall be covered to prevent contact with precipitation.</u> "
	9VAC25-32-545 B 3 b		Added to clarify requirements for staging. New language added: " <u>b. The permittee shall notify the department within 24-hours. Notification shall include the biosolids source or sources and amounts, location of the site and reason for staging biosolids longer than seven days;</u> "
	9VAC25-32-545 B 3 c		Added to clarify requirements for staging. New language added: " <u>c. Biosolids which have been staged for greater than seven days shall be spread or removed from the field as soon as field conditions become favorable for land application.</u> "
	9VAC25-32-545 4		Added to clarify requirements for staging. New language added: " <u>4. Staging shall be limited to the amount of biosolids specified in the nutrient management plan to be applied at the intended field;</u> "
	9VAC25-32-545 B 5		Added to clarify requirements for staging. New language added: " <u>5. Biosolids will be staged within the land application area of the field in which the biosolids will be applied or in a permitted field adjacent to the subject field, in a location selected to prevent runoff to waterways and drainage ditches.</u> "
	9VAC25-32-545 B 6		Added to clarify requirements for staging. New language added: " <u>6. Biosolids shall not be staged in the setback areas.</u> "

	9VAC25-32-545 B 7		Added to clarify requirements for staging. New language added: " <u>7. Biosolids shall not be staged overnight within 400 feet of an occupied dwelling unless reduced or waived through written consent of the occupant and landowner.</u> " New language added based on new setback requirements and the potential for complaints regarding staged biosolids.
	9VAC25-32-545 B 8		Added to clarify requirements for staging. New language added: " <u>8. Biosolids shall not be staged overnight within 200 feet of a property line unless reduced or waived through written consent of the landowner.</u> " New language added based on new setback requirements and the potential for complaints regarding staged biosolids.
	9VAC25-32-545 B 9		Added to clarify requirements for staging. New language added: " <u>9 Management practices, as described in the biosolids management plan, shall be utilized as appropriate to prevent pollution of state waters by staged biosolids.</u> "
	9VAC25-32-545 B 10		Added to clarify requirements for staging. New language added: " <u>10. Staged biosolids are to be inspected by the certified land applier daily. After precipitation events of 0.1 inches or greater, to inspections shall ensure that runoff controls are in good working order. Observed excessive slumping, erosion or movement of biosolids is to be corrected within 24 hours. Any ponding at the site is to be corrected and any malodor shall be addressed in accordance with the odor control plan. The certified land applier shall maintain documentation of the inspections of staged biosolids; and</u> "
	9VAC25-32-545 B 11		Added to clarify requirements for staging. New language added: " <u>11. Staged biosolids shall be managed so as to prevent adverse impacts to water quality or public health.</u> "
9VAC25-32-550 A		"A. No person shall apply to the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing storage of	Revise to correct terminology. Replace "Department of Environmental Quality" with "department" and "sewage sludge" with "biosolids". Revised to read: "A. No person shall apply to the Department of Environmental Quality department for a

		sewages sludge without first complying with all requirements..."	permit, a variance, or a permit modification authorizing storage of sewages sludge <u>biosolids</u> without first complying with all requirements..."
9VAC25-32-550 B		"B. Three types of storage may be integrated into a complete sludge management plan..."	Revise to correct terminology and to refer to only two types of storage. Delete types of storage identified in text. Allowed types of storage now included as new 9VAC25-32-550 B 1 and 9VAC25-32-550 B 2. Revised to read: "B. Three <u>Two</u> types of storage may be integrated into a complete sludge <u>biosolids</u> management plan;
	9VAC25-32-550 B 1		New language added: " <u>1. On-site storage, or</u> "
	9VAC25-32-550 B 2		New language added: " <u>2. Routine storage. Only routine storage facilities shall be considered a facility under this regulation.</u> "
9VAC25-32-550 C		"C. Emergency storage..."	Delete subsection.
9VAC25-32-550 C		"D. Temporary storage..."	Delete subsection and associated subdivisions.
	9VAC25-32-550 C		New requirement added: " <u>C. All on-site storage facilities shall comply with the requirements of this section by [12 months from the effective date of this regulation].</u> " This language was added based on TAC discussion requesting clarification of what facilities are included in the regulation
	9VAC25-32-550 D		New requirement added: " <u>D. On-site storage. On-site storage is the short-term storage of biosolids on a constructed surface within a site approved for land application at a location preapproved by the department. These stored biosolids shall be applied only to sites under the operational control of the same owner or operator of the site where the on-site storage is located. Requirements for on-site storage include the following:</u> "
	9VAC25-32-550 D 1		Add to clarify requirements for on-site storage. New language added: " <u>1. The certified land applier shall notify the department within the same working day whenever it is necessary to implement on-site storage. Notification shall include the source or sources, location, and amounts.</u> "
	9VAC25-32-550 D 2		Add to clarify requirements for on-site storage. New language added: " <u>2. A surface shall be constructed with sufficient</u>

			strength to support operational equipment and with a maximum permeability of 10 ⁻⁷ cm/sec;
	9VAC25-32-550 D 3		Add to clarify requirements for on-site storage. New language added: " <u>3. Storage shall be limited to the amount of biosolids specified in the nutrient management plan to be applied at sites under the operational control of the same owner or operator of the site where the on-site storage is located;</u> "
	9VAC25-32-550 D 4		Add to clarify requirements for on-site storage. New language added: " <u>4. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the problem must be corrected within 48 hours. If the problem is not corrected within 48 hours, the biosolids must be removed from the storage site;</u> "
	9VAC25-32-550 D 5		Add to clarify requirements for on-site storage. New language added: " <u>5. All biosolids stored on the on-site storage pad shall be land applied by the 45th day from the first day of on-site storage;</u> "
	9VAC25-32-550 D 6		Add to clarify requirements for on-site storage. New language added: " <u>6. Biosolids storage shall be located to provide minimum visibility from adjacent properties;</u> " Based on discussions with the AG's Office.
	9VAC25-32-550 D 7		Add to clarify requirements for on-site storage. New language added: " <u>7. Best management practices shall be utilized as appropriate to prevent contact with storm water run on or runoff;</u> "
	9VAC25-32-550 D 8		Add to clarify requirements for on-site storage. New language added: " <u>8. Stored biosolids are to be inspected by the certified land applier at least every seven days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding or malodor at the storage site is to be corrected. The certified land applier shall maintain documentation of inspections of stored biosolids.</u> " Based on comments received.

	9VAC25-32-550 D 9		Add to clarify requirements for on-site storage. New language added: " <u>9. The department may prohibit or require additional restrictions for on-site storage in areas of Karst topography and environmentally sensitive sites.</u> "
	9VAC25-32-550 D 10		Add to clarify requirements for on-site storage. New language added: " <u>10. Storage of biosolids shall be managed so as to prevent adverse impacts to water quality or public health.</u> "
9VAC25-32-550 E		"E. Routine storage. Routine storage facilities shall be provided for all land application projects if no alternative means of management is available during non application periods. Plans and specifications for any surface storage facilities (pits, ponds, lagoons) or aboveground facilities (tanks, pads) shall be submitted as part of the minimum information requirements."	Revise to clarify requirements. Revised to read: "E. Routine storage. <u>Routine storage is the long-term storage of biosolids at a facility not located at the site of the wastewater treatment plant, preapproved by the department and constructed specifically for the storage of biosolids to be applied at any permitted site.</u> Routine storage facilities shall be provided for all land application projects if no alternative means of management is available during non application periods. <u>No person shall apply to the department for a permit, a variance, or a permit modification authorizing storage of biosolids without first complying with all requirements adopted pursuant to § 62.1-44.19:3 A 5 of the Code of Virginia.</u> Plans and specifications for any surface storage facilities (pits, ponds, lagoons) or aboveground facilities (tanks, pads) shall be submitted as part of the minimum information requirements. <u>The minimum information requirements include:</u> "
9VAC25-32-550 E 1	9VAC25-32-550 E 1 a	"1. Location. The facility shall be located at an elevation...or equivalent information."	Item renumbered for clarification of requirements. Revised to read: "1. Location. <u>a.</u> The facility shall be located at an elevation...or equivalent information."
9VAC25-32-550 E 1	9VAC25-32-550 E 1 b	"1. Location...Storage facilities should be located to provide minimum visibility."	Item renumbered for clarification of requirements. Revised to read: "1. Location... <u>b.</u> Storage facilities should be located to provide minimum visibility."
9VAC25-32-550 E 1 c	9VAC25-32-550 E 1 c	"1. Location...All storage facilities with a capacity in excess of 100 wet tons and located offsite of property owned by the generator	Item renumbered for clarification of requirements. Replaced "buffer zones" with "setback areas". Revised to include reference to the "reduction of the setback requirements based on site-specific

		shall be provided with a minimum 750-foot buffer zone. The length of the buffer zone considered will be the distance measured from the perimeter of the storage facility. Residential uses, high-density human activities and activities involving food preparation are prohibited within the buffer zone. The board may consider a reduction of up to half of the above buffer requirements based on such facts as lagoon area, topography, prevailing wind direction, and the inclusion of an effective windbreak in the overall design."	factors". Revised to correct terminology. Revised to read: "1. Location... <u>c.</u> All storage facilities with a capacity in excess of 100 wet tons and located offsite of property owned by the generator shall be provided with a minimum 750-foot buffer zone <u>setback area</u> . The length of the buffer zone <u>setback areas</u> considered will be the distance measured from the perimeter of the storage facility. Residential uses, high-density human activities and activities involving food preparation are prohibited within the buffer zone <u>setback areas</u> . The board may consider a reduction of up to half of the above buffer <u>reduce the setback requirements based on site-specific factors</u> such facts as lagoon area <u>facility size</u> , topography, prevailing wind direction, and the inclusion of an effective windbreak in the overall design." Department may reduce, due to new technology such as bio-filters.
9VAC25-32-550 E 2	9VAC25-32-550 E 2 a	"2. Design capacity. The design capacity shall be sufficient to store a minimum volume...warrants such a reduction."	Item renumbered and revised for clarification of requirements. Revised to read: "2. Design capacity. <u>a.</u> The design capacity <u>for storage of liquid biosolids</u> shall be sufficient to store a minimum volume...warrants such a reduction."
9VAC25-32-550 E 2	9VAC25-32-550 E 2 b	"2. Design capacity... If alternative methods of management cannot be adequately verified, contractors should provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of sludge transported into Virginia from out-of-state treatment works generating at least a Class II level treated sludge."	Changed "should" to "shall" and changed "Class II level treated sludge" to "Class B biosolids". Revised to read: "2. Design capacity... <u>b.</u> If alternative methods of management cannot be adequately verified, contractors should <u>shall</u> provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of sludge <u>biosolids</u> transported into Virginia from out-of-state treatment works generating at least a Class II level treated sludge <u>B biosolids</u> ." Changed terms to be consistent throughout the regulations. Changes made based on comments received.
9VAC25-32-550 E 3		"3. Construction."	Renamed section to clarify. Revised to read: "3. Construction <u>Facility design</u> ." Based on TAC discussion.
	9VAC25-32-550 E 3 a		Added new language: " <u>a.</u> All drawings and specifications shall be submitted in accordance with 9VAC25-790-160." Added

			reference to the SCAT reg to clarify requirement based on discussion with permittees.
	9VAC25-32-550 E 3 b		Added new language: " <u>b. The biosolids shall be stored on an engineered surface with a maximum permeability of 10⁻⁷ cm/sec and of sufficient strength to support operational equipment.</u> "
	9VAC25-32-550 E 3 c		Added new language: " <u>c. Storage facilities designed to hold dewatered biosolids shall be constructed with a cover to prevent contact with precipitation.</u> "
	9VAC25-32-550 E 3 d		Added new language: " <u>d. Existing facilities permitted as routine storage facilities and designed to contain liquid biosolids may be used to store dewatered biosolids. The supernatant shall be managed as liquid biosolids in accordance with 9VAC25-32-550 D 5 d. Freeboard shall be maintained in accordance with 9VAC25-32-550 D 5 c. The department may require additional monitoring prior to land application.</u> " This condition was added based on discussions of the TAC that is it not practical to cover existing lagoons where dewatered biosolids are stored.
9VAC25-32-550 E 3	9VAC25-32-550 E 3 e	"Storage facilities shall be of uniform shape (round, square, rectangular) with no narrow or elongated portions. The facilities shall be lined in accordance with the requirements contained in sewerage regulations or certificate."	Renumbered due to adding new subdivisions. Requirement for the facility to be lined deleted. Revised to read: " <u>e. Storage facilities shall be of uniform shape (round, square, rectangular) with no narrow or elongated portions. The facilities shall be lined in accordance with the requirements contained in sewerage regulations or certificate.</u> "
9VAC25-32-550 E 3	9VAC25-32-550 E 3 f	"The facilities shall also be designed to permit access of equipment necessary for loading and unloading biosolids, and should be designed with receiving facilities to allow for even distribution of sludge into the facility."	Renumbered due to adding new subdivisions. Revise: Replace the term "sludge" with "biosolids". Replace the word "should" with "shall" to reflect the mandatory nature of the requirement. Revised to read: " <u>f. The facilities shall also be designed to permit access of equipment necessary for loading and unloading biosolids, and should shall be designed with receiving facilities to allow for even distribution of sludge biosolids into the facility.</u> "
9VAC25-32-550 E 3	9VAC25-32-550 E 3 g	"Design should also provide for truck cleaning facilities as may be	Renumbered due to adding new subdivisions. Revise to clarify requirement. Removed requirement related to temporary

		necessary. Storage facilities with a capacity of 100 wet tons or less shall comply with the provision for temporary storage as a minimum."	storage. Revised to read: " <u>g. Design should</u> The design shall also provide for truck cleaning facilities as may be necessary. Storage facilities with a capacity of 100 wet tons or less shall comply with the provision for temporary storage as a minimum."
9VAC25-32-550 E 4		"4. Monitoring. All sludge storage facilities in excess of 100 wet ton capacity shall be monitored in accordance with the requirements of this regulation. Plans and specifications shall be provided for such a monitoring program in accordance with the minimum information specified in Article 4 (9VAC25-32-670 et seq.) of this part."	Replaced "sludge" with "biosolids". Deleted phrase "in excess of 100 wet ton capacity". Corrected references. Revised to read: "4. Monitoring. All sludge biosolids storage facilities in excess of 100 wet ton capacity shall be monitored in accordance with the requirements of this regulation. Plans and specifications shall be provided for such a monitoring program in accordance with the minimum information specified in Article 4 (9VAC25-32-670 et seq.) of this part <u>9VAC25-32-60 F and 9VAC25-32-410.</u> " Technical correction.
9VAC25-32-550 E 5	9VAC25-32-550 E 5 a	"5. Operation. Only biosolids suitable for land application (Class A or B biosolids) shall be placed into permitted routine storage facilities."	Item renumbered to clarify requirements. Revised to read: "5. Operation. <u>a.</u> Only biosolids suitable for land application (Class A or B biosolids) shall be placed into permitted routine storage facilities."
9VAC25-32-550 E 5	9VAC25-32-550 E 5 b	"5. Operation...Storage of biosolids located offsite or remote from the wastewater treatment works...during the summer months."	Item renumbered to clarify requirements. Revised to read: "5. Operation... <u>b.</u> Storage of biosolids located offsite or remote from the wastewater treatment works...during the summer months."
9VAC25-32-550 E 5	9VAC25-32-550 E 5 c	"5. Operation...Storage facilities should be operated in a manner such that sufficient freeboard is provided...below the top berm elevation."	Item renumbered to clarify requirements. Replace "should" with "shall" to reflect the mandatory nature of the requirement. Revised to read: "5. Operation...Storage facilities should <u>shall</u> be operated in a manner such that sufficient freeboard is provided...below the top berm elevation."
9VAC25-32-550 E 5	9VAC25-32-550 E 5 d	"5. Operation...Complete plans for supernatant disposal shall be provided in accordance with Article 4 (9VAC25-32-670 et seq.) of this part. Plans for supernatant disposal may include transport to the sewage treatment works, mixing with the biosolids for	Item renumbered to clarify requirements. Revised to correct section reference. Revised to replace "sludge" with "biosolids". Revised to read: "5. Operation... <u>d.</u> Complete plans for supernatant disposal shall be provided in accordance with Article 4 (9VAC25-32-670 et seq.) of this part <u>9VAC25-32-60 F.</u> Plans for supernatant disposal may include transport to the

		land application or land application separately. However, separate land application of supernatant will be regulated as liquid sludge; additional testing, monitoring and treatment (disinfection) may be required."	sewage treatment works, mixing with the biosolids for land application or land application separately. However, separate land application of supernatant will be regulated as liquid sludge biosolids; additional testing, monitoring and treatment (disinfection) may be required."
9VAC25-32-550 E 5	9VAC25-32-550 E 5 e	"5. Operation...The facility site shall be fenced to a minimum height of five feet; gates and locks shall be provided to control access. The fence should be posted with signs identifying the facility. The fence should not be constructed closer than 10 feet to the outside edge of the facility or appurtenances, to allow for adequate accessibility."	Item renumbered to clarify requirements. Revised to replace "should" with "shall" to reflect the mandatory nature of the requirement. Revised to read: "5. Operation... e. The facility site shall be fenced to a minimum height of five feet; gates and locks shall be provided to control access. The fence should <u>shall</u> be posted with signs identifying the facility. The fence should <u>shall</u> not be constructed closer than 10 feet to the outside edge of the facility or appurtenances, to allow for adequate accessibility."
	9VAC25-32-550 E 5 f		Add requirement regarding malodors. New language added: " <u>f. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours.</u> "
9VAC25-32-550 E 7		"7. Recordkeeping. A manifest system shall be developed, implemented and maintained and be available for inspection during operations as part of the overall daily recordkeeping for the project Article 4 (9VAC25-32-670 et seq.) of this part."	Revised to correct reference. Revised to read: 7. Recordkeeping. A manifest system shall be developed, implemented and maintained and be available for inspection during operations as part of the overall daily recordkeeping for the project Article 4 (9VAC25-32-670 et seq.) of this part <u>(9VAC25-32-60 F).</u> "
9VAC25-32-560 A 1		"1. All biosolids application rates, application times and other site management operations shall be restricted as specified in the approved management practices plan. The management practices plan shall include a nutrient management plan as	Delete term "approved". Replace the term "management practices plan" with "biosolids management plan" 2 times in subdivision. Correct reference. Revised to read: "1. All biosolids application rates, application times and other site management operations shall be restricted as specified in the approved <u>biosolids</u> management practices <u>plan</u> . The management practices <u>plan</u> shall include a

		required by 9VAC25-32-680 and prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia."	nutrient management plan as required by 9VAC25-32-680 <u>9VAC25-32-410</u> and prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia." "All components of the biosolids management plan are not required to be approved, particularly the NMP. Revised to be consistent with terminology used throughout the regulations.
9VAC25-32-560 A 2		"2. Biosolids shall be treated to meet standards for land application as required by Part IX (9VAC25-32-310 et seq.) of this chapter prior to delivery at the land application site...The addition of lime or deodorants to biosolids that have been treated to meet standards for land application as required by Part IX (9VAC25-32-310 et seq.) of this chapter shall not constitute alteration..."	Correct section references to account for the addition of new sections. Revised to read: "2. Biosolids shall be treated to meet standards for land application as required by Part IX (9VAC25-32-310 et seq.) (<u>9VAC25-32-303 et seq.</u>) of this chapter prior to delivery at the land application site...The addition of lime or deodorants to biosolids that have been treated to meet standards for land application as required by Part IX (9VAC25-32-310 et seq.) (<u>9VAC25-32-303 et seq.</u>) of this chapter shall not constitute alteration..."
9VAC25-32-560 B		"B. Agricultural use. Agricultural use of sewage sludge is the land application of biosolids (Table 7) to cropland or pasture land to obtain agronomic benefits as a plant nutrient source and soil conditioner. This use shall require a system design that ensures that the land application procedures are performed in accordance with sound agronomic principles."	Replace "sewage sludge" with "biosolids". Table reference and the last sentence of the subsection are not necessary. Revised to read: "B. Agricultural use. Agricultural use of sewage sludge <u>biosolids</u> is the land application of biosolids (Table 7) to cropland or pasture land to obtain agronomic benefits as a plant nutrient source and soil conditioner. This use shall require a system design that ensures that the land application procedures are performed in accordance with sound agronomic principles. "
9VAC25-32-560 B 1		"1. Sludge treatment. As a minimum, biosolids that are applied to the land..."	Replace "Sludge" with "Biosolids" to correct terminology. Revised to read: "1. Sludge <u>Biosolids</u> treatment. As a minimum, biosolids that are applied to the land..."
9VAC25-32-560 B 2		"2. Site soils. Soils best suited for agricultural use...as necessary for crop productions and site management."	Subsection text deleted. Requirements revised and included as new subdivisions or included as guidance. Revised to read: "2. Site soils. Soils best suited for agricultural use...as necessary for crop

			productions and site management."
	9VAC25-32-560 B 2 a		Add new subdivision to specify site soils requirements. New language added: " <u>a. Depth to bedrock or restrictive layers shall be a minimum of 18 inches.</u> "
	9VAC25-32-560 B 2 b		Add new subdivision to specify site soils requirements. Originally part of 9VAC25-32-560 B 2 but modified to update obsolete SCS term and to remove duplicative statement. New language added: " <u>b. Biosolids application shall not be made during times when the seasonal high water table if the soil is within 18 inches of the ground surface. If Natural Resources Conservation Service soil survey information regarding depth of seasonal water table is not available, the water depth shall be determined by soil characteristics or water table observations. If the soil survey or such evidence indicates that the seasonal water table can be less than 18 inches below the average ground surface, soil borings shall be conducted within seven days prior to land application operations during periods of high water for the soil series present to verify the actual water table depth. The use of soil borings and water table depth verification may be required for such sites from November to May (during seasonal high water table elevations) of each year depending on soil type. Constructed channels (agricultural drainage ditches) may be utilized to remove surface water and lower the water table as necessary for crop production and site management.</u> "
9VAC25-32-560 B 2	9VAC25-32-560 B 2 c	"The pH of the biosolids and soil mixture shall be 6.0 or greater... (i.e., use of biosolids containing lime or other alkaline additives at 10% or more of dry solid weight)."	Add new subdivision numbering to clarify existing pH restrictions. Revised to read: " <u>c. The pH of the biosolids and soil mixture shall be 6.0 or greater... (i.e., use of biosolids containing lime or other alkaline additives at 10% or more of dry solid weight).</u> "
	9VAC25-32-560 B 2 d		Add new subdivision to clarify the requirements for soil test pH. New language added: " <u>d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids</u>

			to be land applied have not been alkaline stabilized." Based on comments received.
	9VAC25-32-560 B 2 e		Add new subdivision to clarify the requirements for soil test potassium levels. New language added: " <u>e. When soil test potassium levels are less than 38 part per million (Mehlich I analytical procedure or equivalent), the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application.</u> " Based on comments received.
9VAC25-32-560 B 3 a		"a. Application rates and requirements. Process design considerations shall include sludge composition, soil characteristics, climate, vegetation, cropping practices, and other pertinent factors in determining application rates. Site specific application rates should be proposed using pertinent biosolids plant available nitrogen (PAN) and crop nutrient needs (agronomic rate listed in Table 10 and the cumulative trace element loading rates (Table 8). Lime amended biosolids shall be applied at rates...may prescribe more restrictive site management practices than the following criteria:"	Requirement modified to clarify requirements. Table references corrected. Revised to read: " a. Application rates and requirements. Process design considerations shall include sludge composition, soil characteristics, climate, vegetation, cropping practices, and other pertinent factors in determining application rates. Site specific application rates should be proposed using pertinent biosolids plant available nitrogen (PAN) and crop nutrient needs (agronomic rate listed in Table 10 and shall not exceed the rates established in the nutrient management plan nor result in exceedance of the cumulative trace element loading rates (Table 8) specified in 9VAC25-32-356. Lime amended biosolids shall be applied at rates...may prescribe more restrictive site management practices than the following criteria: "
	9VAC25-32-560 B 3 b		Add new requirement: " <u>b. Agricultural use of stabilized septage shall be in accordance with the same requirements as biosolids.</u> "
	9VAC25-32-560 B 3 c		Add new subdivision. New language added: " <u>c. Application frequency.</u> "
9VAC25-32-560 B 3 a (1)	9VAC25-32-560 B 3 c	"(1) For infrequent applications, biosolids may be applied such that the total crop needs for nitrogen (Table 10 Agronomic Rate) is not exceeded (in order to	Deleted subdivision reference. Revised to correct table reference. Revised to read: " (1) For infrequent applications, Infrequent. <u>If biosolids are applied to a field only once in a three year period, biosolids may be applied such that the total crop needs for nitrogen (Table 10 Agronomic Rate) is not</u>

		<p>minimize the amount of nitrogen that passed below the crop root zone to actually or potentially pollute groundwater), during a one-year crop rotation period including the production and harvesting of two crops in succession within a consecutive 12-month growing season. However, the total application of biosolids shall not exceed a computed maximum loading of 15 dry tons per acre, unless a higher loading can be justified in relation to both the biosolids and the site characteristics, including the biosolids nutrient and dry solids content and the site slopes. No further application of biosolids shall be allowed for a period of three years from the date that the agronomic rate is achieved for the crop or crops grown in the following 12 months."</p>	<p>exceeded (in order to minimize the amount of nitrogen that passed below the crop root zone to actually or potentially pollute groundwater), during a one-year crop rotation period including the production and harvesting of two crops in succession within a consecutive 12-month growing season. However, the total application of biosolids shall not exceed a computed maximum loading of 15 dry tons per acre, unless a higher loading can be justified in relation to both the biosolids and the site characteristics, including the biosolids nutrient and dry solids content and the site slopes. No further application of biosolids shall be allowed for a period of three years from the date that the agronomic rate is achieved for the crop or crops grown in the following 12 months. The infrequent application rate may be restricted (i) down to 10% of the maximum cumulative loading rate (9VAC25-32-356 Table 3) for cadmium and lead or (ii) to account for all sources of nutrients applied to the site, including existing residuals." Revised subdivision reference due to deletion of subdivision (2).</p>
9VAC25-32-560 B 3 a (2)		"(2) The infrequent application rate may be restricted..."	Delete subdivision – included as part of 9VAC25-32-B 3 c.
9VAC25-32-560 B 3 a (3)		"(3) The infrequent application rate may also be restricted by the lime content..."	Delete subdivision – duplicative requirement already included in soil pH limitations.
9VAC25-32-560 B 3 a (4)		"(4) For systems designed for frequent application of biosolids..."	Delete subdivision – requirement obsolete with the addition of the Nutrient Management Plan requirements.
9VAC25-32-560 B 3 a (5)		"(5) Frequent below-agronomic application rate..."	Delete subdivision.
9VAC25-32-560 B 3 a (5) (a)		"(a) A maximum of 70% of the nitrogen requirement..."	Text deleted – obsolete with NMP requirement.
9VAC25-32-560 B 3 a (5) (b)		"(b) A maximum of 50% of the nitrogen requirement..."	Text deleted – obsolete with NMP requirement.
9VAC25-32-560 B 3 a (5) (b)		"For systems designed for frequent below agronomic	Delete subdivision.

		rates...on warm season grasses and alfalfa."	
9VAC25-32-560 B 3 b		"b. Standard slopes and topography...as defined by soil survey information."	Subdivision deleted. Sentences are narrative in nature and provide no specific requirements.
9VAC25-32-560 B 3 c	9VAC25-32-560 B 3 d	"c. Operations."	Revise numbering to account for addition of new subdivision. Revised to read: " e. <u>d.</u> Operations."
9VAC25-32-560 B 3 c (1)	9VAC25-32-560 B 3 d (1)	"(1) Field management. The application rate of all application equipment shall be routinely measured as described in an approved sludge management plan and every effort shall be made to ensure uniform application of biosolids within sites in accordance with approved maximum design loading rates. Liquid sludges shall not be applied at rates exceeding 14,000 gallons per acre, per application. Sufficient drying times shall be allowed between subsequent applications. Application vehicles should be suitable for use on agricultural land. Pasture and hay fields should be grazed or clipped to a height of approximately four and six inches, respectively, prior to biosolids application unless the biosolids can be uniformly applied so as not to mat down the vegetative cover so that the site vegetation can be clipped to a height of approximately four inches within one week of the biosolids application. If application methods do not result in a uniform distribution of biosolids...to achieve a uniform distribution of the applied biosolids."	Terminology revised for clarity and consistency. Replaced "sludge" with "biosolids" for consistency. Replaced "should" with "shall" to reflect the mandatory nature of the requirements. Revised to read: "(1) Field management. The application rate of all application equipment shall be routinely measured as described in <u>an approved sludge a biosolids management plan and every effort shall be made to ensure uniform application of biosolids within sites in accordance with approved maximum design loading rates.</u> Liquid <u>sludges biosolids</u> shall not be applied at rates exceeding 14,000 gallons per acre, per application. Sufficient drying times shall be allowed between subsequent applications. Application vehicles should <u>shall</u> be suitable for use on agricultural land. Pasture and hay fields should <u>shall</u> be grazed or clipped to a height of approximately four and six inches, respectively, prior to biosolids application unless the biosolids can be uniformly applied so as not to mat down the vegetative cover so that the site vegetation can be clipped to a height of approximately four inches within one week of the biosolids application. <u>Biosolids shall be applied such that uniform application is achieved.</u> If application methods do not result in a uniform distribution of biosolids...to achieve a uniform distribution of the applied biosolids."

<p>9VAC25-32-560 B 3 c (1)</p>	<p>9VAC25-32-560 B 3 d (2)</p>	<p>"Surface incorporation may be required on cropland by the department, or the local monitor with the approval of the department, to mitigate excessive odors when incorporation is practicable and compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service."</p>	<p>Added subdivision designation to existing text to clarify requirements for surface incorporation. Revised to use current terminology. Revised to say mitigate malodors when compatible with a conservation plan or contract, based on comments received. Revised to clarify requirements. Revised to read: "<u>(2) Surface incorporation may be required on cropland by the department, or the local monitor with the approval of the department, to mitigate excessive odors malodors when incorporation is practicable and compatible with a soil conservation plan or contract meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service.</u>"</p>
	<p>9VAC25-32-560 B 3 d (3)</p>		<p>Add subdivision to specify restriction for slopes above 15%. New language added: "<u>(3) Slopes above 15%. Biosolids shall not be applied to site slopes exceeding 15%. This restriction may be waived by the department for the establishment and maintenance of perennial vegetation or based on site specific criteria and BMPs in place in the field.</u>" Based on comment, the organic matter in the biosolids helps to stabilize the soil allowing the growth of stabilizing vegetation and reducing erosion and soil loss.</p>
	<p>9VAC25-32-560 B 3 d (4)</p>		<p>Added to clarify requirements. New language added: "<u>(4) Biosolids application timing and slope restrictions shall conform to criteria contained in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia.</u>"</p>
<p>9VAC25-32-560 B 3 c (1)</p>		<p>"In accordance with the management practices plan, when biosolids are applied to site slopes greater than 7.0%...one of the following practices shall be used to prevent runoff and soil loss:"</p>	<p>Delete requirement – remove duplicative statements.</p>
<p>9VAC25-32-560 B 3 c (1) (a)</p>		<p>"(a) Biosolids are surface applied or subsurface injected beneath an established living crop..."</p>	<p>Delete requirement – remove duplicative statements.</p>
<p>9VAC25-32-560</p>		<p>"(b) Biosolids are surface</p>	<p>Delete requirement – remove duplicative</p>

B 3 c (1) (b)		applied or subsurface injected so that immediately after application..."	statements.
9VAC25-32-560 B 3 c (1) (c)		"(c) Biosolids are applied by surface application or subsurface injection..."	Delete requirement – remove duplicative statements.
9VAC25-32-560 B 3 c (1)		"In accordance with the management practices plan if site slopes exceed 5.0% up to 7.0%..."	Delete requirement – remove duplicative statements.
9VAC25-32-560 B 3 c (2)	9VAC25-32-560 B 3 d (5)	"(2) Restrictions. Biosolids application shall not be made during times when the seasonal high water table of the soil is within 18 inches of the ground surface. Biosolids may only be applied to snow-covered ground if the snow cover does not exceed one inch and the snow and biosolids are immediately incorporated within 24 hours of application. Liquid sludges may not be applied to frozen ground. Dry or dewatered sludges may be applied to frozen ground only if (i) site slopes are 5.0% or less; (ii) a 200 foot vegetative (i.e., at least 60% uniformly covered by stalks or other vegetation) buffer is maintained from surface water courses; and (iii) the entire application site has uniform soil coverage of at least 60% with stalks, vines, stubble, or other vegetation and the site soils are characterized as well drained."	Subdivision renumbered to account for revised subdivision numbering. Subdivision heading revised to "snow". Revised to clarify requirements. Revised to read: " (2) Restrictions. <u>(5) Snow.</u> Biosolids application shall not be made during times when the seasonal high water table of the soil is within 18 inches of the ground surface. Biosolids may only be applied to snow-covered ground if the snow cover does not exceed one inch and the snow and biosolids are immediately incorporated within 24 hours of application. Liquid sludges may not be applied to frozen ground. Dry or dewatered sludges may be applied to frozen ground only if (i) site slopes are 5.0% or less; (ii) a 200 foot vegetative (i.e., at least 60% uniformly covered by stalks or other vegetation) buffer is maintained from surface water courses; and (iii) the entire application site has uniform soil coverage of at least 60% with stalks, vines, stubble, or other vegetation and the site soils are characterized as well drained. <u>If snow melts during biosolids application, incorporation is not necessary.</u> "
9VAC25-32-560 B 3 c (2)		"In accordance with the management practices plan, when biosolids are land applied between March 15 and September 1...so the plant is able to use available nitrogen	Text deleted: This requirement is duplicative of that found in DCR's NMP regulations.

		released by the biosolids."													
9VAC25-32-560 B 3 c (2)		"On sites with a high leaching index...in accordance with the nutrient management plan."	Text deleted: Leaching index is obsolete; timing requirement for these sites are addressed in the DCR NMP Standards and Criteria.												
9VAC25-32-560 B 3 d	9VAC25-32-560 B 3 e	"d. Buffer zones."	Renumber subdivision to account for inclusion of an additional subdivision. Replace the term "buffer zones" with "setback distances" for consistent use of terminology. Revised to read: " d. Buffer zones e. Setback distances."												
9VAC25-32-560 B 3 d (1)	9VAC25-32-560 B 3 e (1)	"(1) Setback distances. If slopes are greater than 7.0% and biosolids will be applied between November 16 and March 15, the setback distances to perennial streams and other surface water bodies shall be doubled. The location of land application of biosolids shall not occur within the following minimum buffer zone requirements:"	Revise to clarify requirements. Revised to read: "(1) Setback distances. If slopes are greater than 7.0% and biosolids will be applied between November 16 and March 15, the setback distances to perennial streams and other surface water bodies shall be doubled. The location of land application of biosolids shall not occur within the following minimum <u>setback distance</u> requirements (Table 1 of this section):"												
9VAC25-32-560 B 3 d (1)		Buffer zone requirements table.	Delete buffer zone requirements table. Requirements addressed in new Table 1.												
	9VAC25-32-560 B 3 e (1)		Insert table to address and clarify the minimum setback distance requirements. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>TABLE 1</u> <u>MINIMUM SETBACK DISTANCE REQUIREMENTS</u></th> </tr> <tr> <th style="text-align: center;"><u>Adjacent Feature</u></th> <th style="text-align: center;"><u>Minimum Setback Distance (Feet) to Land Application Area</u></th> </tr> </thead> <tbody> <tr> <td><u>Occupied dwelling</u></td> <td style="text-align: center;"><u>200^{1,2,3}</u></td> </tr> <tr> <td><u>Odor sensitive receptors (without injection or same day incorporation)</u></td> <td style="text-align: center;"><u>400³</u></td> </tr> <tr> <td><u>Odor sensitive receptors (with injection or same day incorporation)</u></td> <td style="text-align: center;"><u>200</u></td> </tr> <tr> <td><u>Property lines</u></td> <td style="text-align: center;"><u>100^{2,4}</u></td> </tr> </tbody> </table>	<u>TABLE 1</u> <u>MINIMUM SETBACK DISTANCE REQUIREMENTS</u>		<u>Adjacent Feature</u>	<u>Minimum Setback Distance (Feet) to Land Application Area</u>	<u>Occupied dwelling</u>	<u>200^{1,2,3}</u>	<u>Odor sensitive receptors (without injection or same day incorporation)</u>	<u>400³</u>	<u>Odor sensitive receptors (with injection or same day incorporation)</u>	<u>200</u>	<u>Property lines</u>	<u>100^{2,4}</u>
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			<p><u>Property lines of publicly accessible sites⁵</u> <u>200</u></p>
			<p><u>Water supply wells or springs</u> <u>100</u></p>
			<p><u>Public water supply reservoirs</u> <u>400</u></p>
			<p><u>All segments of stream and tributaries designated as a Public Water Supply under the Water Quality Standards</u> <u>100</u></p>
			<p><u>Surface waters without a vegetated buffer</u> <u>100</u></p>
			<p><u>Surface waters with a 35-foot vegetated buffer</u> <u>35</u></p>
			<p><u>Agricultural drainage ditches</u> <u>10</u></p>
			<p><u>All improved roadways</u> <u>10</u></p>
			<p><u>Rock outcrops</u> <u>25</u></p>
			<p><u>Open sinkholes</u> <u>100</u></p>
			<p><u>Limestone rock outcrops and closed sinkholes⁶</u> <u>50</u></p>
			<p>¹<u>The setback distance to occupied dwellings may be reduced or waived upon written consent of the occupant and landowner of the dwelling.</u></p> <p>²<u>The department shall grant to any landowner or resident in the vicinity of a biosolids land application site an extended setback of up to 200 feet from their property line and up to 400 feet from their occupied dwelling upon request from their physician based on medical reasons. In order for an extended setback request to be granted, the request must be submitted to the department in writing on a form provided by the department. A request must be received by the department no later</u></p>

			<p><u>than 48 hours before land application commences on the field affected by the extended setback, and communicated to the permittee no later than 24 hours before land application commences on the field affected by the extended setback. The department may extend a setback distance within 48 hours of land application if requested by the Virginia Department of Health in connection with the landowner or resident's physician.</u></p> <p><u>³Setback distances may be extended beyond 400 feet where an evaluation by the Virginia Department of Health determines that a setback in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual.</u></p> <p><u>⁴The setback distance to property lines may be reduced or waived upon written consent of the landowner.</u></p> <p><u>⁵Publicly accessible sites are open to the general public and routinely accommodate pedestrians and include, but are not limited to, schools, churches, hospitals, parks, nature trails, businesses open to the public and sidewalks. Temporary structures, public roads or similar thoroughfares are not considered publicly accessible.</u></p> <p><u>⁶A closed sinkhole does not have an open conduit to groundwater. The setback from a closed sinkhole may be reduced or waived upon evaluation by a professional soil scientist.</u></p>
<p>9VAC25-32-560 B 3 d (1)</p>	<p>9VAC25-32-560 B 3 e (2)</p>	<p>"The stated buffer zones to adjacent property boundaries and drainage ditches constructed for agricultural operations may</p>	<p>Revised to be consistent with footnotes in Table 1. Revised to use consistent terminology – replace "buffer" with "setback". Revised to read: "<u>(2) The stated buffer zones to adjacent property</u></p>

		<p>be reduced by 50% for subsurface application (includes same day incorporation) unless state or federal regulations provide more stringent requirements. Written consent of affected landowners is required to reduce buffer distances from property lines ad dwellings. In cases where more than one buffer distance is involved, the most restrictive distance governs. Buffer requirements may be increased or decreased based on either site specific features, such as agricultural drainage features and site slopes, or on biosolids application procedures demonstrating precise placement methods."</p>	<p>boundaries and drainage ditches constructed for agricultural operations may be reduced by 50% for subsurface application (includes same day incorporation) unless state or federal regulations provide more stringent requirements. Written consent of affected landowners is required to reduce buffer distances from property lines ad dwellings. In cases where more than one buffer setback distance is involved, the most restrictive distance governs. Buffer requirements may be increased or decreased based on either site specific features, such as agricultural drainage features and site slopes, or on biosolids application procedures demonstrating precise placement methods."</p>
	9VAC25-32-560 B 3 e (3)		<p>Add subdivision to address waivers. New language added: "<u>(3) Waivers. Waivers from adjacent property residents and landowners may only be used to reduce setback distances from occupied dwellings and property lines.</u>"</p>
9VAC25-32-560 B 3 d (2)	9VAC25-32-560 B 3 e (4)	<p>"(2) Extended buffer setback distances. For applications where surface applied biosolids are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances from odor sensitive receptors may be extended to 400 feet or more and no</p>	<p>Renumbered to account for revised subdivision numbering. Revised to be consistent with footnotes in Table 1. Revised to use consistent terminology – replace "buffer" with "setback". Revised to read: "(2) <u>(4) Extended buffer setback distances. The department may increase setback requirements based on site specific features, such as agricultural drainage features and site slopes. For applications where surface applied biosolids are not incorporated, the department (or local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances</u></p>

		<p>biosolids shall be applied within such extended buffer zones. In accordance with 9VAC25-32-100 and 9VAC25-32-490, the board may impose standards and requirements that are more stringent when required to protect public health and the environment, or prevent nuisance conditions from developing, either prior to or during biosolids operations."</p>	<p>from odor sensitive receptors may be extended to 400 feet or more and no biosolids shall be applied within such extended buffer zones. In accordance with 9VAC25-32-100 and 9VAC25-32-490, the board may impose standards and requirements that are more stringent when required to protect public health and the environment, or prevent nuisance conditions from developing, either prior to or during biosolids operations."</p>
9VAC25-32-560 B 3 e		<p>"e. Monitoring and testing. Groundwater and surface water and soils monitoring and testing may be required..."</p>	<p>Delete requirement.</p>
	9VAC25-32-560 B 3 f		<p>Add subdivision to address voluntary extensions of setback distances. New language added: "<u>f. Voluntary extensions of setback distances. If a permit holder negotiates a voluntary agreement with a landowner or resident to extend setback distances or add other more restrictive criteria than required by this regulation, the permit holder shall document the agreement in writing and provide the agreement to the department. Voluntary setback increases or other management criteria will not become an enforceable part of the land application permit unless the permit holder modifies the biosolids management plan to include the additional restriction.</u>"</p>
	9VAC25-32-560 B 3 g		<p>Add subdivision to address extension of setbacks with phosphorus index. New language added: "<u>g. Extension of setback distances with phosphorus index. If the application rate included in a nutrient management plan for a biosolids land application site is dependent upon an extended setback distance calculated using the phosphorus index, the phosphorus index calculations shall be included in the nutrient management plan. The extended setback distance shall be an enforceable part of the permit.</u>"</p>
9VAC25-32-560		"C. Forestland	<p>Strike "commercial". Revised to read: "C.</p>

C		(Silviculture). Silvicultural use includes application of biosolids to commercial timber and fiber production land..."	Forestland (Silviculture). Silvicultural use includes application of biosolids to commercial timber and fiber production land..."
9VAC25-32-560 C 1		"1. Sludge standards. Refer to 9VAC25-32-590 and 9VAC25-32-660 of this Article."	Replace "Sludge" with "Biosolids". Corrected reference to the standards of this article; section 590 was repealed. Revised to read: "1. Sludge <u>Biosolids</u> standards. Refer to 9VAC25-32-590 and 9VAC25-32-660 standards of this Article."
9VAC25-32-560 C 2	9VAC25-32-560 C 2 a	"2. Site suitability. Site suitability requirements should conform to subdivision A 2 of this section."	Revise and renumber to clarify requirements. Replace "should" with "shall" to reflect the mandatory nature of the requirement. Revised to read: "2. Site suitability. <u>a. Site suitability requirements shall conform to subdivision A 2 of this section the requirements contained in subdivision B 2 of this section.</u> "
9VAC25-32-560 C 2	9VAC25-32-560 C 2 b	"2. Site suitability...The soil pH should be managed at the natural soil pH for the types of trees proposed for growth."	Revise and renumber to clarify requirements. Replace "should" with "shall" to reflect the mandatory nature of the requirement. Revised to read: "2. Site suitability... <u>b. The Notwithstanding the requirements of subdivision B 2 of this section the soil pH shall be managed at the natural soil pH for the types of trees proposed for growth.</u> "
	9VAC25-32-560 C 2 c		Add new requirement regarding soil test potassium level. New language added: " <u>c. Notwithstanding the requirements of subdivision B 2 of this section the soil test potassium level is not required to be at a minimum level at the time of biosolids application.</u> "
VAC25-32-560 C 3 a		"a. Application rates. Biosolids application rates shall be in accordance with the management practices plan and information provided by the Virginia Department of Forestry."	Revise to clarify requirements and to correct terminology. Reworded to clarify that VDF recommendations should be included in the OMP. Revised to read: "a. Application rates. Biosolids application rates shall be in accordance with the <u>biosolids management practices plan and</u> . <u>The biosolids management plan shall include</u> information provided by the Virginia Department of Forestry."
VAC25-32-560 C 3 b (1) (a)		"(a) High pressure spray shall not be utilized if public activity is occurring within	Revised to clarify public access restrictions. Revised to read: "(a) High pressure spray shall not be utilized if public activity is

		1,500 feet downwind of the application site. Public access to the site shall be adequately limited or controlled following application (Article 3 (9VAC25-32-490 et seq.) of this part)."	occurring within 1,500 feet downwind of the application site. Public access to the site shall be adequately limited or controlled following application (Article 3 (9VAC25-32-490 et seq.) of this part) <u>in accordance with Article 3 (9VAC25-490 et seq.) of this part.</u> "
VAC25-32-560 C 3 b (1) (b)		"(b) The operations should only proceed when the wind velocity is less than or equal to 15 miles per hour..."	Delete requirement. Not consistent with requirements for agricultural use. Requirements included in guidance.
VAC25-32-560 C 3 b (1) (c)	VAC25-32-560 C 3 b (1) (b)	"(c) Biosolids application vehicles should have adequate clearance to be suitable for silvicultural field use."	Subdivision renumbered due to deletion of subdivision. Text revised to clarify requirements. Revised to read: " (c) <u>(b)</u> Biosolids application vehicles should <u>shall</u> have adequate <u>ground</u> clearance to be suitable for silvicultural field use."
VAC25-32-560 C 3 b (1) (d)	VAC25-32-560 C 3 b (1) (c)	"(d) Application scheduling should take into account high rainfall periods and periods of freezing conditions."	Subdivision renumbered to account for section reorganization and text reworded to clarify that these items can be addressed in the OMP. Revised to read: " (d) <u>(c)</u> Application scheduling should included in the biosolids management plan <u>shall take into account high-rainfall periods and periods of freezing conditions.</u> "
VAC25-32-560 C 3 b (1) (e)	VAC25-32-560 C 3 b (1) (d)	"(e) Monitoring requirements shall be site specific and may include groundwater, surface water or soils, for frequent application sites."	Subdivision renumbered to account for section reorganization. Revised to read: " (e) <u>(d)</u> Monitoring requirements shall be site specific and may include groundwater, surface water or soils, for frequent application sites."
VAC25-32-560 C 3 b (2)		"(2) Buffer zones. Buffer zones should conform to those for agricultural utilization. Refer to Table 2."	Revise to correct terminology and to correct table reference. Revised to read: " <u>(2) Buffer zones. Buffer zones should Setbacks. Setbacks shall conform to those for agricultural utilization. Refer to Table 2 Table 1 of this section.</u> "
9VAC25-32-560 D		"D. Reclamation of disturbed land. Biosolids applied at rates exceeding agronomic rates...and the Virginia Cooperative Extension Service."	Header left - Text deleted. Statements narrative in nature to be included in guidance. Substantive requirements moved to subdivision D 3 a. Revised to read: "D. Reclamation of disturbed land. Biosolids applied at rates exceeding agronomic rates...and the Virginia Cooperative Extension Service. "
9VAC25-32-560 D 1		"1. Sludge standards. Refer to the standards of this article."	Replace "Sludge" with "Biosolids". Revised to read: "1. Sludge <u>Biosolids</u> standards. Refer to the standards of this article."

<p>9VAC25-32-560 D 2</p>		<p>"2. Site suitability. Site suitability requirements should conform to subdivision A 2 of this section. Exemptions may be considered on a case-by-case basis."</p>	<p>Revised to clarify requirements. Replace "should" with "shall". Correct subdivision reference. Revised to read: "2. Site suitability. Site suitability requirements should <u>shall</u> conform to subdivision A 2 of this section <u>the requirements contained in subdivision B 2 of this section</u>. Exemptions may be considered on a case-by-case basis."</p>
<p>9VAC25-32-560 D 3 a</p>		<p>"a. Application rates. The application rates shall be established in the management practices plan through recommendations provided by appropriate agencies including the Virginia Department of Mines, Minerals, and Energy and the appropriate faculty of the Department of Crop and Soil Environmental Sciences of the Virginia Polytechnic Institute and State University."</p>	<p>Text revised to add substantive statement originally part of 9VAC250320560 D. Terms revised for consistency. DCR added due to NMP requirements. Revised to read: "a. Application rates. The <u>biosolids</u> application rates shall be established in the <u>biosolids</u> management practices plan <u>through recommendations provided by appropriate agencies including in consultation with</u> the Virginia Department of Mines, Minerals, and Energy and the <u>Virginia Department of Conservation and Recreation</u> and the appropriate faculty of the Department of Crop and Soil Environmental Sciences of the Virginia Polytechnic Institute and State University. <u>The nutrient management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance when land application is proposed at greater than agronomic rates.</u>"</p>
<p>9VAC25-32-560 D 3 b</p>		<p>"b. Vegetation selection. The land should be seeded with grass and legumes even when reforested in order to help prevent erosion and utilize available plant nitrogen. The management practices plan should include information on the seeding mixture and a detailed seeding schedule."</p>	<p>Corrected reference to the operations management plan to be consistent throughout the regulation. Replace "should" with "shall" to reflect the mandatory nature of the requirements. Revised to read: "b. Vegetation selection. The land should <u>shall</u> be seeded with grass and legumes even when reforested in order to help prevent erosion and utilize available plant nitrogen. The <u>biosolids</u> management practices plan <u>should</u> shall include information on the seeding mixture and a detailed seeding schedule."</p>
<p>9VAC25-32-560 D 3 c (1)</p>		<p>"(1) The soil pH should be maintained at 6.0 or above...shall be limited by the most restrictive cumulative trace element loading (Table 8)."</p>	<p>Corrected reference to 9VAC25-32-356 Table 3, due to renumbering tables. Replaced "should" with "shall". Revised to read: "(1) The soil pH should <u>shall</u> be maintained at 6.0 or above...shall be limited by the most restrictive cumulative trace element loading (Table 8) <u>(9VAC25-</u></p>

			32-356 Table 3)."
9VAC25-32-560 D 3 c (2)		"(2) Surface material should be turned or worked prior to the surface application of liquid biosolids, to minimize potential for runoff, since solids in liquid sludge can clog soil surface pores."	Replace "should" with "shall". Narrative statement deleted – to be included in guidance. Revised to read: "(2) Surface material should <u>shall</u> be turned or worked prior to the surface application of liquid biosolids, to minimize potential for runoff, since solids in liquid sludge can clog soil surface pores. "
9VAC25-32-560 D 3 c (3)		"(3) Unless the applied biosolids are determined to be Class A...of three years following the date of the last sludge application unless the crop is tested to verify that the crop is not contaminated. No animals whose products are intended for human consumption...last biosolids application, unless representative samples of the animal products are tested after grazing and prior to marketing to verify that they are not contaminated."	Revise text to delete ambiguous testing requirements. Replace "sludge" with "biosolids". Revised to read: "(3) Unless the applied biosolids are determined to be Class A...of three years following the date of the last sludge <u>biosolids</u> application unless the crop is tested to verify that the crop is not contaminated. No animals whose products are intended for human consumption...last biosolids application, unless representative samples of the animal products are tested after grazing and prior to marketing to verify that they are not contaminated. "
9VAC25-32-570 A		"A. Exceptional quality. Distribution and marketing provides for the sale or distribution of exceptional quality biosolids or mixtures of Class I treated biosolids with other materials such that the mixture achieves the Class A pathogen control standard. Distribution or marketing of Class I treated biosolids that have been mixed with inert materials may be approved on a case-by-case basis. Inert materials shall not contain pathogens or attract vectors. Use of such mixtures for agricultural purposes should be evaluated through proper testing or research programs	Revised to specify that any product derived from biosolids must meet the same standards as the biosolids. Revised to delete the statement regarding "inert materials shall not contain pathogens or attract vectors" - this is suitable for guidance. Replace "should" with "shall" to reflect the mandatory nature of the requirements. Corrected grammatical/spelling error - replace word "access" with "assess". Revised to separate specific requirements into new subdivisions. Revised to read: "A. Exceptional quality. Distribution and marketing provides for the sale or distribution of exceptional quality biosolids or mixtures of Class I treated exceptional quality <u>Class I treated exceptional quality</u> biosolids with other materials such that the mixture achieves the Class A pathogen control standard, vector attraction reduction and pollutant control standards. <u>standards.</u> Distribution or marketing of Class I treated <u>Class A</u> biosolids that have

		designed to access the suitability of the material for such use. Exceptional quality biosolids marketed as fertilizers or soil conditioners must be registered with the Virginia Department of Agriculture and Consumer Services. The permit applicant shall obtain such registration prior to issuance of a permit by the board for residential, agricultural, reclamation or silvicultural use."	been mixed with inert materials may be approved on a case-by-case basis. Inert materials shall not contain pathogens or attract vectors. Use of such mixtures for agricultural purposes should <u>shall</u> be evaluated through proper testing or research programs designed to access <u>assess</u> the suitability of the material for such use. Exceptional quality biosolids marketed as fertilizers or soil conditioners must be registered with the Virginia Department of Agriculture and Consumer Services. The permit applicant shall obtain such registration prior to issuance of a permit by the board for residential, agricultural, reclamation or silvicultural use. <u>meet the following conditions:</u> "
	9VAC25-32-570 A 1		New language added in accordance with provisions of §3.2-3607 of the Code of VA, as requested by VDACS in comment letter. New language added: " <u>1. The biosolids product must be registered with the Virginia Department of Agriculture and Consumer Services in accordance with the provisions of § 3.2-3607 of the Code of Virginia.</u> "
9VAC25-32-570 A 1	9VAC25-32-570 A 2	"1. Because of the high potential for public contact with the distributed and marketed sludge or sludge products, only biosolids processed to meet criteria specified for Class I treatment process sequences designed to eliminate or further reduce pathogens (PFRP) shall be sold or given away for application to land. In addition, the biosolids must meet vector attraction reduction requirements and other quality standards (Table 8) as required for the intended use."	Renumber subdivision and revise to clarify requirements. Revised to read: " 4. 2. Because of the high potential for public contact with the distributed and marketed sludge or sludge products, only <u>The biosolids product must be processed to meet criteria specified for Class I treatment process sequences designed to eliminate or further reduce pathogens (PFRP) shall be sold or given away for application to land. In addition, the biosolids must meet vector attraction reduction requirements and other quality standards (Table 8) as required for the intended use Class A pathogen requirements as specified in 9VAC25-32-675 A.</u> "
	9VAC25-32-570 A 3		Add specific conditions for exceptional biosolids. New language added: " <u>3. The biosolids product must meet one of the vector attraction reduction requirements as specified in 9VAC25-32-685 B 1 through B 8.</u> "

	9VAC25-32-570 A 4		Add specific conditions for exceptional biosolids. New language added: " <u>4. The biosolids product must meet the ceiling concentrations specified in 9VAC25-32-356 Table 2.</u> "
	9VAC25-32-570 A 5		Add specific conditions for exceptional biosolids. New language added: " <u>5. The biosolids product must meet the pollutant concentrations specified in 9VAC25-32-356 Table 4.</u> "
	9VAC25-32-570 A 6		Add specific conditions for exceptional biosolids. New language added: " <u>6. Additional parameters may be required for screening purposes such as organic chemicals, aluminum (mg/kg, water soluble boron (mg/kg), calcium (mg/kg), chlorides (mg/l), manganese (mg/kg), sulfur (mg/kg), and those pollutants for which removal credits are granted.</u> " Based on comments received and TAC discussions.
9VAC25-32-570 A 2	9VAC25-32-570 B	"2. Exceptional quality biosolids may be distributed and marketed in either bulk amounts (unpacked) or as a bagged product. For purposes of this regulation, a bulk use quantity of biosolids will be defined as a volume of that sludge product containing 15 dry tons or more of sewage sludge. Application of bulk use quantities of exceptional quality biosolids to home vegetable gardens shall not exceed an equivalent annual loading rate of approximately one pound dry weight of biosolids per square foot (garden products may constitute a significant portion of a family diet and the amount of applied biosolids cannot be specifically controlled as in agricultural use). Exceptional quality biosolids can ideally be used as soil amendments	Revise numbering and add subdivisions to clarify requirements. Revise to delete unnecessary statements and delete language that is clarified in the new subdivisions. Revised to read: " <u>2. B. Bulk distribution. Exceptional quality biosolids may be distributed and marketed in either bulk amounts (unpacked) or as a bagged product. For purposes of this regulation, a bulk use quantity of biosolids will be defined as a volume of that sludge product containing 15 dry tons or more of sewage sludge. Application of bulk use quantities of exceptional quality biosolids to home vegetable gardens shall not exceed an equivalent annual loading rate of approximately one pound dry weight of biosolids per square foot (garden products may constitute a significant portion of a family diet and the amount of applied biosolids cannot be specifically controlled as in agricultural use). Exceptional quality biosolids can ideally be used as soil amendments for horticulture and landscaping purposes such as:</u> <u>a. Use in potting soil mixes;</u> <u>b. Use for seed beds, for establishment of grass and other vegetation and for topdressing of existing lawns and landscape vegetation. The following</u>

		for horticulture and landscaping purposes such as: a. Use in potting soil mixes; b. Use for seed beds, for establishment of grass and other vegetation and for topdressing of existing lawns and landscape vegetation."	<u>requirements shall apply to distribution and marketing of biosolids products:"</u>
	9VAC25-32-570 B 1		Added language as requested by VDACS. New language added: " <u>1. Any permit holder who distributes or markets exceptional quality biosolids shall comply with the reporting requirements of § 3.2-3609 and § 3.2-3610. The records shall be maintained for five years and made available to the department upon request.</u> "
	9VAC25-32-570 B 2		Added requirement for land application in accordance with a nutrient management plan. New language added: " <u>2. Bulk quantities of exceptional quality biosolids shall be land applied in accordance with a nutrient management plan prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia, except under the following conditions:</u> "
	9VAC25-32-570 B 2 a		Add exception language: " <u>a. The percent solids of the biosolids is equal to or greater than 90% based on moisture content and total solids, or</u> "
	9VAC25-32-570 B 2 b		Add exception language: " <u>A blended product derived from biosolids is utilized for a purpose other than land application at agricultural operations.</u> " Based on TAC discussions.
	9VAC25-32-570 B 3		Added requirement: " <u>3. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the plan to the farm operator of the site and the Department of Conservation and Recreation.</u> "
9VAC25-32-570 A 3	9VAC25-32-570 C	"3. Only exceptional quality biosolids produced from an approved sludge processing facility can be distributed and marketed. Biosolids sold for use as	Renumber and add section header to specify requirements for the approval of biosolids sources. Grammatical corrections made. Statements addressed in other sections of the regulations deleted. Revised to read: " 3-C. Approval of

		soil amendments...the methods described in this article."	<u>biosolids sources</u> . Only exceptional quality biosolids produced from an <u>approved</u> a sludge processing facility <u>approved by the board</u> can be distributed and marketed. Biosolids sold for use as soil amendments...the methods described in this article."
9VAC25-32-570 B		"B. Permits. Any owner who proposes to distribute or market exceptional quality biosolids..."	Delete subsection - addressed in other sections of the regulations.
9VAC25-32-570 B		"The permittee shall maintain records on the sludge processing facility..."	Delete subsection materials - addressed in other sections of the regulations.
9VAC25-32-570 C	9VAC25-32-570 D	"C. Information furnished to all users. Biosolids distributed for public use in Virginia shall have proper identification of the producer and a description of the product including an acceptable statement of quality based on representative analytical testing. This information shall be provided by the owner in either brochures for bulk distribution or by proper labeling on bagged material. Labeling requirements should be addressed in a management plan or in the operations and maintenance manual for the processing facility."	Renumbered to account for renumbering of subsections. Revised based on change of terminology: Labeling requirements shall be addressed in a biosolids management plan. Revised to read: " C. D Information furnished to all users. Biosolids distributed for public use in Virginia shall have proper identification of the producer and a description of the product including an acceptable statement of quality based on representative analytical testing. This information shall be provided by the owner in either brochures for bulk distribution or by proper labeling on bagged material. Labeling requirements should <u>shall</u> be addressed in a <u>biosolids</u> management plan or in the <u>operations and maintenance manual for the processing facility</u> . <u>Either a label shall be affixed to the bag or other container in which exceptional quality biosolids is sold or given away for application to the land, or an information sheet shall be provided to the person who receives exceptional quality biosolids. The label or information sheet shall contain the following information:</u> "
	9VAC25-32-570 D 1		Add information requirement for label: " <u>1. The name and address of the person who prepared the exceptional quality biosolids;</u> "
	9VAC25-32-570 D 2		Add information requirement for label: " <u>2. A statement that application of the exceptional quality biosolids to the land is prohibited except in accordance with the instructions on the label or information sheet;</u> "

	9VAC25-32-570 D 3		Add information requirement for label: " <u>3. The annual whole sludge application rate for the biosolids does not cause any of the annual pollutant loading rates in Table 5 of 9VAC25-320356 to be exceeded; and</u> " This requirement is taken from the VPDES regulation and represents the EPA 503 requirement.
	9VAC25-32-570 D 4		Added: and with the labeling provisions of § 3.2-3611 of the COV as requested by VDACS. Add information requirement for label: " <u>4. Information required in accordance with regulations promulgated under § 3.2-3611 of the Code of Virginia.</u> "
9VAC25-32-570 C		"Information provided to users of marketed or distributed biosolids should note the following: (i) the nutrient content...(v) that for any uses not specified the user should contact the distributor at a listed address or telecommunications number."	Delete statement and information requirements. Labeling requirements modified to conform with EPA 503 and VDACS regulations and are included in new section 9VAC25-32-570 D.
9VAC25-32-570 D		"D. Distribution Information...in such a manner so as to circumvent the foregoing requirements."	Delete requirements. Distribution information will be included in VDACS recordkeeping requirements and, if applicable, in a nutrient management plan.
	9VAC25-32-570 E		Add subsection to address recordkeeping requirements: " <u>E. Recordkeeping.</u> "
	9VAC25-32-570 E 1		Add subdivision to address recordkeeping requirements: " <u>1. The person who prepares exceptional quality biosolids shall develop the following information and shall retain the information for five years:</u> "
	9VAC25-32-570 E 1 a		Add subdivision to address recordkeeping requirements: " <u>a. The concentration of each pollutant listed in Table 4 of 9VAC25-32-356 in the biosolids;</u> "
	9VAC25-32-570 E 1 b		Add subdivision to address recordkeeping requirements: " <u>b. The following certification statement:</u> " <u>I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9VAC25-32-675 A and the vector attraction reduction requirement in (insert one of the vector attraction</u>

			<u>reduction requirements in 9VAC25-32-685 B 1 through B 8) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."</u>
	9VAC25-32-570 E 1 c		Add subdivision to address recordkeeping requirements: " <u>c. A description of how the Class A pathogen requirements in 9VAC25-32-675 A are met; and"</u>
	9VAC25-32-570 E 1 d		Add subdivision to address recordkeeping requirements: " <u>d. A description of how one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 is met."</u>
	9VAC25-32-570 E 2		Add subdivision to address recordkeeping requirements: " <u>2. The person who derives the material that meets the criteria of exceptional quality biosolids shall develop the following information and shall retain the information for five years:"</u>
	9VAC25-32-570 E 2 a		Add subdivision to address recordkeeping requirements: " <u>a. The concentration of each pollutant listed in Table 4 of 9VAC25-32-356 in the material;"</u>
	9VAC25-32-570 E 2 b		Add subdivision to address recordkeeping requirements: " <u>b. The following certification statement: "I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9VAC25-32-675 A and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."</u> "
	9VAC25-32-570 E 2 c		Add subdivision to address recordkeeping requirements: " <u>c. A description of how the Class A pathogen requirements in 9VAC25-32-675 A are met; and"</u>

	9VAC25-32-570 E 2 d		Add subdivision to address recordkeeping requirements: " <u>d. A description of how one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 is met.</u> "
	9VAC25-32-570 E 3		Add subdivision to address recordkeeping requirements: " <u>3. If the requirements in 9VAC25-32-356 B 4 b are met when biosolids is sold or given away in a bag or other container for application to the land, the person who prepares the biosolids that is sold or given away in a bag or other container shall develop the following information and shall retain the information for five years:</u> "
	9VAC25-32-570 E 3 a		Add subdivision to address recordkeeping requirements: " <u>a. The annual whole sludge application rate for biosolids that does not cause the annual pollutant loading rates in Table 5 of 9VAC25-32-356 to be exceeded;</u>
	9VAC25-32-570 E 3 b		Add subdivision to address recordkeeping requirements: " <u>b. The concentration of each pollutant listed in Table 5 of 9VAC25-32-356 in the biosolids;</u> "
	9VAC25-32-570 E 3 c		Add subdivision to address recordkeeping requirements: " <u>c. The following certification statement: "I certify, under the penalty of law, that the information that will be used to determine compliance with the management practices in 9VAC25-32-570 E and F, the Class A pathogen requirement in 9VAC25-32-675 A, and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."</u> ;"
	9VAC25-32-570 E 3 d		Add subdivision to address recordkeeping requirements: " <u>d. A description of hoe the Class A pathogen requirements in 9VAC25-32-675 A are met; and"</u>
	9VAC25-		Add subdivision to address recordkeeping

	32-570 E 3 e		requirements: " <u>e. A description of how one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8 is met.</u> "
	9VAC25-32-570 F		Add subsection to address annual report requirements: " <u>F. An annual report shall be submitted to the department that includes the following information:</u> "
	9VAC25-32-570 F 1		Add subdivision to address annual report requirements: " <u>1. Total amount in dry tons of exceptional quality biosolids distributed in a bag or other container per year;</u>
	9VAC25-32-570 F 2		Add subdivision to address annual report requirements: " <u>2. Total amount in dry tons of exceptional quality biosolids distributed in bulk; and</u> "
	9VAC25-32-570 F 3		Add subdivision to address annual report requirements: " <u>3. Total amount in dry tons of exceptional quality biosolids distributed from each approved source.</u> "
9VAC25-32-580 1		"1. Incineration. Emission quality control requirements will be established...Buffer separation requirements will be established on a site specific basis in accordance with applicable regulations."	Replace "Buffer separation" with Setback distance" to use consistent terminology. Revised to read: "1. Incineration. Emission quality control requirements will be established... <u>Buffer separation Setback distance requirements</u> will be established on a site specific basis in accordance with applicable regulations."
9VAC25-32-580 4		"4. Dedicated sites. The primary purpose of surface disposal sites...may be recorded as a dedicated site in the appropriate court deed book (Table A-1)."	Delete reference to "Table A-1" and replace with reference to a "Sludge Disposal Site Dedication Form". Revised to read: "4. Dedicated sites. The primary purpose of surface disposal sites...may be recorded as a dedicated site in the appropriate court deed book (Table A-1) <u>by filing a Sludge Disposal Site Dedication Form.</u> "
9VAC25-32-590		"Standards for agricultural use."	Repeal section - not necessary.
9VAC25-32-600		"Biosolids characteristics; nutrients; trace elements; organic chemicals."	Repeal section - requirements already addressed in other sections of the regulations.
9VAC25-32-610		"Biosolids treatment."	Repeal section. These requirements moved to section 9VAC25-32-675 and 9VAC25-32-685 and replaced with VPDES language.
9VAC25-32-620		"Site access time restrictions."	Repeal section. Requirements moved to 9VAC25-32-675 B 5.
9VAC25-32-630		"Biosolids management for	Repeal section. Requirements already

		nitrogen loading."	addressed in other sections of the regulations and in the NMP requirements.
9VAC25-32-640		"Maximum application rates for trace elements."	Repeal section. Requirements addressed in other sections of the regulations.
9VAC25-32-650		"Maximum application rates for high lime biosolids."	Repeal section. Requirements addressed in 9VAC25-32-560 B 3 b.
9VAC25-32-660		"Maximum application rates for biosolids."	Repeal section. Requirements are already addressed in the NMP.
	9VAC25-32-665		Add new article header: " <u>Article 4 Pathogen and Vector Attraction Reduction</u> "
	9VAC25-32-665		Add new section to address the scope of the pathogen and vector attraction reduction requirements. New language added: " <u>9VAC25-32-665. Scope.</u> "
	9VAC25-32-665 A		Add new subsection to address scope of this article: " <u>A. This article contains the requirements for a biosolids to be classified either Class A or Class B with respect to pathogens.</u> "
	9VAC25-32-665 B		Add new subsection to address scope of this article: " <u>B. This article contains the site restrictions for land on which a Class B biosolids is applied.</u> "
	9VAC25-32-665 C		Add new subsection to address scope of this article: " <u>C. This article contains the pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site.</u> "
	9VAC25-32-665 D		Add new subsection to address scope of this article: " <u>D. This article contains alternative vector attraction reduction requirements for biosolids that is applied to the land or place on a surface disposal site.</u> "
9VAC25-32-670		"Article 4 Permit Application Information for Biosolids Use."	Delete header.
9VAC25-32-670		"Minimum information required for a management practices plan utilizing land application."	Repeal section.
	9VAC25-32-675		Add new section to address the requirements related to Pathogens. This section contains text from the VPDES regulation. New language added: " <u>9VAC25-32-675. Pathogens.</u> "
	9VAC25-32-675 A		Add new subsection to address requirements: " <u>A. Biosolids - Class A.</u> "
	9VAC25-32-675 A		Add new subdivision to address requirements: " <u>1. The requirement in</u>

	1		subdivision 2 of this subsection and the requirements in either subdivision 3, 4, 5, 6, 7, or 8 of this subsection shall be met for biosolids to be classified as Class A biosolids with respect to pathogens."
	9VAC25-32-675 A 2		Add new subdivision to address requirements: " <u>2. The Class A pathogen requirements in subdivisions 3 through 8 of this subsection shall be met either prior to meeting or at the same time the vector attraction reduction requirements in 9VAC25-32-685, except the vector attraction reduction requirements in 9VAC25-32-685 B 6 through B 8 are met.</u> "
	9VAC25-32-675 A 3		Add new subdivision to address requirements: " <u>3. Class A - Alternative 1.</u> "
	9VAC25-32-675 A 3 a		Add new subdivision to address requirements: " <u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8.</u> "
	9VAC25-32-675 A 3 b		Add new subdivision to address requirements: " <u>b. The temperature of the sewage sludge that is used as biosolids or disposed shall be maintained at a specific value for a period of time.</u> "
	9VAC25-32-675 A 3 b (1)		Add new subdivision to address requirements: " <u>(1) When the percent solids of the sewage sludge is 7.0% or higher, the temperature of the sewage sludge shall be 50°C or higher, the time period shall be 20 minutes or longer; and the temperature and</u>

			<p><u>time period shall be determined using equation (1), except when small particles of sewage sludge are heated by either warmed gasses or an immiscible liquid.</u></p> <table border="1"> <tr> <td style="text-align: center;">EQUATION (1)</td> </tr> <tr> <td>$D = 131,700,000/10^{0.1400t}$</td> </tr> <tr> <td>D = time in days</td> </tr> <tr> <td>T = temperature in degrees Celsius</td> </tr> </table>	EQUATION (1)	$D = 131,700,000/10^{0.1400t}$	D = time in days	T = temperature in degrees Celsius
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	9VAC25-32-675 A 3 b (2)		<p>Add new subdivision to address requirements: "<u>(2) When the percent solids of the sewage sludge is 7.9% or higher and small particles of sewage sludge are heated by either warmed gasses or an immiscible liquid, the temperature of the sewage sludge shall be 50°C or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (1).</u>"</p>				
	9VAC25-32-675 A 3 b (3)		<p>Add new subdivision to address requirements: "<u>(3) When the percent solids of the sewage sludge is less than 7.0% and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (1).</u>"</p>				
	9VAC25-32-675 A 3 b (4)		<p>Add new subdivision to address requirements: "<u>(4) When the percent solids of the sewage sludge is less than 7.0%, the temperature of the sewage sludge is 50°C or higher; and the time period is 30 minutes or longer; the temperature and time period shall be determined using equation (2).</u></p> <table border="1"> <tr> <td style="text-align: center;">EQUATION (2)</td> </tr> <tr> <td>$D = 50,070,000/10^{0.1400t}$</td> </tr> <tr> <td>D = time in days</td> </tr> <tr> <td>T = temperature in degrees Celsius</td> </tr> </table>	EQUATION (2)	$D = 50,070,000/10^{0.1400t}$	D = time in days	T = temperature in degrees Celsius
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	9VAC25-32-675 A 4		<p>Add new subdivision to address requirements: "<u>4. Class A Alternative 2.</u>"</p>				
	9VAC25-32-675 A 4 a		<p>Add new subdivision to address requirements: "<u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in</u></p>				

			<p><u>the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8."</u></p>
	9VAC25-32-675 A 4 b		<p>Add new subdivision to address requirements: "<u>b. The pH and temperature of the sewage sludge that is used as biosolids or disposed shall be maintained at specific values for a period of time."</u></p>
	9VAC25-32-675 A 4 b (1)		<p>Add new subdivision to address requirements: "<u>(1) The pH of the sewage sludge that is used as biosolids or disposed shall be raised to above 12 and shall remain above 12 for 72 hours."</u></p>
	9VAC25-32-675 A 4 b (2)		<p>Add new subdivision to address requirements: "<u>(2) The temperature of the sewage sludge shall be above 52°C for 12 hours or longer during the period that the pH of the sewage sludge is above 12; and"</u></p>
	9VAC25-32-675 A 4 b (3)		<p>Add new subdivision to address requirements: "<u>(3) At the end of the 72-hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%."</u></p>
	9VAC25-32-675 A 5		<p>Add new subdivision to address requirements: "<u>5. Class A - Alternative 3."</u></p>
	9VAC25-32-675 A 5 a		<p>Add new subdivision to address requirements: "<u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the</u></p>

			<p><u>biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8."</u></p>
	9VAC25-32-675 A 5 b		<p>Add new subdivision to address requirements: "<u>b. The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.</u>"</p>
	9VAC25-32-675 A 5 b (1)		<p>Add new subdivision to address requirements: "<u>(1) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.</u>"</p>
	9VAC25-32-675 A 5 b (2)		<p>Add new subdivision to address requirements: "<u>(2) When the density of the enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of the enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meets the enteric viruses density requirement are documented; and"</u></p>
	9VAC25-32-675 A 5 b (3)		<p>Add new subdivision to address requirements: "<u>(3) After the enteric virus reduction in subdivision 5 b (2) of this subsection is demonstrated for the pathogen treatment process, the biosolids continues to be Class A with respect to</u></p>

			<u>enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in subdivision 5 b (2) of this subsection."</u>
	9VAC25-32-675 A 5 c		Add new subdivision to address requirements: " <u>c. The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova."</u>
	9VAC25-32-675 A 5 c (1)		Add new subdivision to address requirements: " <u>(1) When the density of the viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova until the next monitoring episode for the sewage sludge."</u>
	9VAC25-32-675 A 5 c (2)		Add new subdivision to address requirements: " <u>(2) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented."</u>
	9VAC25-32-675 A 5 c (3)		Add new subdivision to address requirements: " <u>(3) After the helminth ova reduction in subdivision 5 c (2) of this subsection is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values demonstrated in subdivision 5 c (2) of this subsection."</u>
	9VAC25-32-675 A		Add new subdivision to address requirements: " <u>6. Class A - Alternative 4."</u>

<p>6 9VAC25-32-675 A 6 a</p>		<p>Add new subdivision to address requirements: "<u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8.</u>"</p>
<p>9VAC25-32-675 A 6 b</p>		<p>Add new subdivision to address requirements: "<u>b. The density of enteric viruses in the biosolids shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentrations in 9VAC25-32-356 Table 2; the pollutant concentrations in 9VAC25-32-356 Table 4; the Class A pathogen requirements in subsection A of this section; and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8, unless otherwise specified by the board.</u>"</p>
<p>9VAC25-32-675 A 6 c</p>		<p>Add new subdivision to address requirements: "<u>c. The density of viable helminth ova in the sewage sludge shall be less than one gram per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for</u></p>

			<p><u>application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentrations in 9VAC25-32-356 Table 2; the pollutant concentrations in 9VAC25-32-356 Table 4; the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8, unless otherwise specified by the board."</u></p>
	9VAC25-32-675 A 7		<p>Add new subdivision to address requirements: "<u>7. Class A - Alternative 5.</u>"</p>
	9VAC25-32-675 A 7 a		<p>Add new subdivision to address requirements: "<u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8.</u>"</p>
	9VAC25-32-675 A 7 b		<p>Add new subdivision to address requirements: "<u>b. Biosolids that is used or disposed shall be treated in one of the processes to further reduce pathogens described in subsection E of this section.</u>"</p>
	9VAC25-32-675 A 8		<p>Add new subdivision to address requirements: "<u>8. Class A - Alternative 6.</u>"</p>
	9VAC25-32-675 A 8 a		<p>Add new subdivision to address requirements: "<u>a. Either the density of fecal coliform in the biosolids shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of the Salmonella sp. bacteria in</u></p>

			<p><u>the biosolids shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids is used or disposed; at the time the biosolids is prepared for sale or giveaway in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the ceiling concentration in 9VAC25-32-356 Table 2, the pollutant concentrations in 9VAC25-32-356 Table 4, the Class A pathogen requirements in subsection A of this section, and one of the vector attraction reduction requirements in 9VAC25-32-685 B 1 through B 8."</u></p>
	9VAC25-32-675 A 8 b		<p>Add new subdivision to address requirements: "<u>b. Biosolids that is used or disposed shall be treated in a process that is equivalent to a process to further reduce pathogens, as determined by the board."</u></p>
	9VAC25-32-685 B		<p>Add new subsection to address requirements: "<u>B. Biosolids - Class B."</u></p>
	9VAC25-32-685 B 1		<p>Add new subdivision to address requirements: "<u>1. Minimum requirements for Class B biosolids."</u></p>
	9VAC25-32-685 B 1 a		<p>Add new subdivision to address requirements: "<u>a. The requirements in either subdivisions 2, 3, or 4 of this subsection shall be met for a sewage sludge to be classified as Class B biosolids with respect to pathogens."</u></p>
	9VAC25-32-685 B 1 b		<p>Add new subdivision to address requirements: "<u>b. The site restrictions in subdivision B 5 of this section shall be met when biosolids that meets Class B pathogen requirements in subdivision 2, 3, or 4 of this subsection is applied to the land."</u></p>
	9VAC25-32-685 B 2		<p>Add new subdivision to address requirements: "<u>2. Class B - Alternative 1."</u></p>
	9VAC25-32-685 B 2 a		<p>Add new subdivision to address requirements: "<u>a. Seven representative samples of the biosolids that is used or disposed shall be collected."</u></p>
	9VAC25-32-685 B 2 b		<p>Add new subdivision to address requirements: "<u>b. The geometric mean of the density of fecal coliform in the samples collected in subdivision 2 a of this</u></p>

			subsection shall be less than either <u>2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).</u> "
	9VAC25-32-685 B 3		Add new subdivision to address requirements: " <u>3. Class B - Alternative 2. Biosolids that is used or disposed shall be treated in one of the processes to significantly reduce pathogens described in subsection D of this section.</u> "
	9VAC25-32-685 B 4		Add new subdivision to address requirements: " <u>4. Class B - Alternative 3. Biosolids that is used or disposed shall be treated in a process that is equivalent to a process to significantly reduce pathogens, as determined by the board.</u> "
	9VAC25-32-685 B 5		Add new subdivision to address requirements: " <u>5. Site restrictions.</u> "
	9VAC25-32-685 B 5 a		Add new subdivision to address requirements: " <u>a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.</u> "
	9VAC25-32-685 B 5 b		Add new subdivision to address requirements: " <u>b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remains on the land surface for four months or longer prior to incorporation into the soil.</u> "
	9VAC25-32-685 B 5 c		Add new subdivision to address requirements: " <u>c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remains on the land surface for less than four months prior to incorporation into the soil.</u> "
	9VAC25-32-685 B 5 d		Add new subdivision to address requirements: " <u>d. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.</u> "
	9VAC25-32-685 B 5 e		Add new subdivision to address requirements: " <u>e. Animals shall not be grazed on the land for 30 days after application of biosolids (60 days for</u>

			lactating dairy livestock)."															
	9VAC25-32-685 B 5 f		Add new subdivision to address requirements: " <u>f. Turf grown on land where biosolids is applied shall not be harvested for one year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the board.</u> "															
	9VAC25-32-685 B 5 g		Add new subdivision to address requirements: " <u>g. Public access to land with a high potential for public exposure shall be restricted for one year after application of biosolids.</u> "															
	9VAC25-32-685 B 5 h		Add new subdivision to address requirements: " <u>h. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.</u> "															
	9VAC25-32-685 B 5 -Table 1		<p>Add new table to address requirements: "<u>Table 1</u>"</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;"><u>TABLE 1</u> <u>TIME RESTRICTIONS FOLLOWING COMPLETION OF BIOSOLIDS APPLICATION ASSOCIATED WITH CLASS B PATHOGEN REDUCTION</u></th> </tr> <tr> <th style="text-align: center;"><u>Type of Application</u></th> <th style="text-align: center;"><u>Surface⁽¹⁾</u></th> <th style="text-align: center;"><u>Incorporated⁽²⁾</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>Control of access for high potential for public contact⁽³⁾</u></td> <td style="text-align: center;"><u>12 months</u></td> <td style="text-align: center;"><u>12 months</u></td> </tr> <tr> <td style="text-align: center;"><u>Time lapse required before above ground food crops with harvested parts that touch the biosolids/soil mixture can be harvested</u></td> <td style="text-align: center;"><u>14 months</u></td> <td style="text-align: center;"><u>14 months</u></td> </tr> <tr> <td style="text-align: center;"><u>Time lapse before food</u></td> <td style="text-align: center;"><u>20 months</u></td> <td style="text-align: center;"><u>38 months</u></td> </tr> </tbody> </table>	<u>TABLE 1</u> <u>TIME RESTRICTIONS FOLLOWING COMPLETION OF BIOSOLIDS APPLICATION ASSOCIATED WITH CLASS B PATHOGEN REDUCTION</u>			<u>Type of Application</u>	<u>Surface⁽¹⁾</u>	<u>Incorporated⁽²⁾</u>	<u>Control of access for high potential for public contact⁽³⁾</u>	<u>12 months</u>	<u>12 months</u>	<u>Time lapse required before above ground food crops with harvested parts that touch the biosolids/soil mixture can be harvested</u>	<u>14 months</u>	<u>14 months</u>	<u>Time lapse before food</u>	<u>20 months</u>	<u>38 months</u>
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<u>Type of Application</u>	<u>Surface⁽¹⁾</u>	<u>Incorporated⁽²⁾</u>																
<u>Control of access for high potential for public contact⁽³⁾</u>	<u>12 months</u>	<u>12 months</u>																
<u>Time lapse required before above ground food crops with harvested parts that touch the biosolids/soil mixture can be harvested</u>	<u>14 months</u>	<u>14 months</u>																
<u>Time lapse before food</u>	<u>20 months</u>	<u>38 months</u>																

			<u>crops with harvested parts below the land surface can be harvested</u>		
			<u>Harvesting food crops, feed crops and fiber crops</u>	<u>1 month</u>	<u>1 month</u>
			<u>Grazing and feeding harvested crops to animals whose products are consumed by humans⁽⁴⁾</u>	<u>1 month</u>	<u>1 month</u>
			<u>Grazing of farm animals whose products are not consumed by humans</u>	<u>1 month</u>	<u>1 month</u>
			<u>Harvesting turf for placement on land with a high potential for public exposure or a lawn⁽⁵⁾</u>	<u>12 months</u>	<u>12 months</u>
			<u>Notes:</u> <u>(1) Remains on land surface for four months or longer prior to incorporation.</u> <u>(2) Remains on land surface for less than four months prior to incorporation.</u> <u>(3) Public access to agricultural sites and other sites with a low potential for direct contact with the ground surface shall be controlled for 30 days.</u> <u>(4) The restriction for lactating dairy cows is 60 days.</u> <u>(5) This time restriction must be met</u>		

			<u>unless otherwise specified by the department.</u>
	9VAC25-32-685 C		Add new subsection to address requirements: " <u>C. Domestic septage. The site restrictions in subdivision B 5 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.</u> "
	9VAC25-32-685 D		Add new subsection to address requirements: " <u>D. Processes to significantly reduce pathogens (PSRP).</u> "
	9VAC25-32-685 D 1		Add new subdivision to address requirements: " <u>1. Aerobic digestion. Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20°C and 60 days at 15°C.</u> "
	9VAC25-32-685 D 2		Add new subdivision to address requirements: " <u>2. Air drying. Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above 0°C.</u> "
	9VAC25-32-685 D 3		Add new subdivision to address requirements: " <u>3. Anaerobic digestion. Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35°C to 55°C and 60 days at 20°C.</u> "
	9VAC25-32-685 D 4		Add new subdivision to address requirements: " <u>4. Composting. Using either the with-in vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40°C or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55°C.</u> "
	9VAC25-32-685 D 5		Add new subdivision to address requirements: " <u>5. Lime stabilization. Sufficient lime is added to the sewage sludge to raise the pH of the sewage</u>

			sludge to 12 after two hours of contact."
	9VAC25-32-685 E		Add new subsection to address requirements: " <u>E. Processes to further reduce pathogens (PFRP).</u> "
	9VAC25-32-685 E 1		Add new subdivision to address requirements: " <u>1. Composting. Using either the with-in vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55°C or higher for three days. Using the windrow composting method, the temperature of the sewage sludge is maintained at 55°C or higher for 15 days or longer. During the period when the compost is maintained at 55°C or higher, there shall be a minimum of five turnings of the windrow.</u> "
	9VAC25-32-685 E 2		Add new subdivision to address requirements: " <u>2. Heat drying. Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10.0% or lower. Either the temperature of the sewage sludge particles exceeds 80°C or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80°C.</u> "
	9VAC25-32-685 E 3		Add new subdivision to address requirements: " <u>3. Heat treatment. Liquid sewage sludge is heated to a temperature of 180°C or higher for 30 minutes.</u> "
	9VAC25-32-685 E 4		Add new subdivision to address requirements: " <u>4. Thermophilic aerobic digestion. Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55°C to 60°C.</u> "
	9VAC25-32-685 E 5		Add new subdivision to address requirements: " <u>5. Beta ray irradiation. Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20°C).</u> "
	9VAC25-32-685 E 6		Add new subdivision to address requirements: " <u>6. Gamma ray irradiation. Sewage sludge is irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at dosages of at least</u>

			1.0 megarad at room temperature (ca. 20°C)."
	9VAC25-32-685 E 7		Add new subdivision to address requirements: " <u>7. Pasteurization. The temperature of the sewage sludge is maintained at 70°C or higher for 30 minutes or longer.</u> "
9VAC25-32-680		"Minimum site specific information required for a management practices plan."	Repeal section.
	9VAC25-32-685		Add new section to address the requirements for vector attraction reduction. Language from VPDES for consistency between regulations. New language added: " <u>9VAC25-32-685. Vector attraction reduction.</u> "
	9VAC25-32-685 A		Add new subsection to address requirements: " <u>A. Conditions under which vector attraction reductions are required:</u> "
	9VAC25-32-685 A 1		Add new subdivision to address requirements: " <u>1. One of the vector attraction reduction requirements in subdivisions in B 1 through B 10 of this section shall be met when bulk biosolids is applied to agricultural land, forest, a public contact site, or a reclamation site;</u> "
	9VAC25-32-685 A 2		Add new subdivision to address requirements: " <u>2. One of the vector attraction reduction requirements in subdivisions B 1 through B 8 of this section shall be met when bulk biosolids is applied to a lawn or home garden.</u> "
	9VAC25-32-685 A 3		Add new subdivision to address requirements: " <u>3. One of the vector attraction reduction requirements in subdivision B 1 through B 8 of this section shall be met when biosolids is sold or given away in a bag or other container for application to the land;</u> "
	9VAC25-32-685 A 4		Add new subdivision to address requirements: " <u>4. One of the vector attraction reduction requirements in subdivisions B 1 through B 11 of this section shall be met when sewage sludge (other than domestic septage) is placed on an active sewage sludge unit;</u> "
	9VAC25-32-685 A 5		Add new subdivision to address requirements: " <u>5. One of the vector attraction reduction requirements in</u>

			subdivision B 9, B 10, or B 12 of this section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; and"
	9VAC25-32-685 A 6		Add new subdivision to address requirements: " <u>6. One of the vector attraction reduction requirements in subdivisions B 9 through B 12 shall be met when domestic septage is placed on an active sewage sludge unit.</u> "
	9VAC25-32-685 B		Add new subsection to address requirements: " <u>B. Vector attraction reduction options.</u> "
	9VAC25-32-685 B 1		Add new subdivision to address requirements: " <u>1. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%, calculated according to the method in 9VAC25-32-450 F 8.</u> "
	9VAC25-32-685 B 2		Add new subdivision to address requirements: " <u>2. When the 38% volatile solids reduction requirement in subdivision 1 of this subsection cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30°C and 37°C. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17%, vector attraction reduction is achieved.</u> "
	9VAC25-32-685 B 3		Add new subdivision to address requirements: " <u>3. When the 38% volatile solids reduction requirement in subdivision 1 of this section cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of 2.0% or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.</u> "

	9VAC25-32-685 B 4		Add new subdivision to address requirements: " <u>4. The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20°C.</u> "
	9VAC25-32-685 B 5		Add new subdivision to address requirements: " <u>5. Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40°C and the average temperature of the sewage sludge shall be higher than 45°C.</u> "
	9VAC25-32-685 B 6		Add new subdivision to address requirements: " <u>6. The pH of sewage sludge shall be raised to 12 or higher by alkaline addition and, without the addition of more alkaline material, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.</u> "
	9VAC25-32-685 B 7		Add new subdivision to address requirements: " <u>7. The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials.</u> "
	9VAC25-32-685 B 8		Add new subdivision to address requirements: " <u>8. The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials.</u> "
	9VAC25-32-685 B 9		Add new subdivision to address requirements: " <u>9. Sewage sludge injection requirements:</u> "
	9VAC25-32-685 B 9 a		Add new subdivision to address requirements: " <u>a. Sewage sludge shall be injected below the surface of the land.</u> "
	9VAC25-32-685 B 9 b		Add new subdivision to address requirements: " <u>b. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.</u> "
	9VAC25-		Add new subdivision to address

	32-685 B 9 c		requirements: " <u>c. When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.</u> "
	9VAC25-32-685 B 10		Add new subdivision to address requirements: " <u>10. Sewage sludge incorporation requirements:</u> "
	9VAC25-32-685 B 10 a		Add new subdivision to address requirements: " <u>a. Sewage sludge applied to the land surface or placed on an active sewage sludge unit shall be incorporated into the soil within six hours after application to or placement on the land unless otherwise specified by the board.</u> "
	9VAC25-32-685 B 10 b		Add new subdivision to address requirements: " <u>b. When the sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.</u> "
	9VAC25-32-685 B 11		Add new subdivision to address requirements: " <u>11. Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.</u> "
	9VAC25-32-685 B 12		Add new subdivision to address requirements: " <u>12. The pH of domestic septage shall be raised to 12 or higher by alkaline addition and, without the addition of more alkaline material, shall remain at 12 or higher for 30 minutes.</u> "
9VAC25-32-690 A		"A. No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless...including their certificate number issued by the department. Monthly reports submitted in accordance with the requirements of 9VAC25-32-440 B shall bear the name and certificate number of the certified land	New language added to clarify requirements. Subsection reference corrected. Revised to read: "A. No person shall land apply biosolids pursuant to a permit issued in accordance with this regulation unless...including their certificate number issued by the department. <u>The Certified land applicator shall maintain an operator field log to document at minimum, site location, arrival and departure times, inspectors or any visitors to the site, complaints received and any unusual condition or event. The field log shall be available for inspection by the</u>

		applicators..."	department. Monthly reports submitted in accordance with the requirements of 9VAC25-32-440 B <u>9VAC25-32-360 A</u> shall bear the name and certificate number of the certified land applicators..." Based on comment regarding certified land applier accountability, difficulties in getting proper documentation with monthly reports and lack of Permittee cooperation in regard to a certified land applier being on-site at all times
9VAC25-32-700 C	9VAC25-32-700 D	"Individuals certified as land application operators in other states..."	Insert a subsection header number designation for material related to "individuals certified as land application operators in other states" that was included in 9VAC25-32-700 C to clarify requirements. Revised to read: " <u>D.</u> Individuals certified as land application operators in other states..."
9VAC25-32-760 B 3		"3. Failing to ensure that land application of biosolids complies with permit requirements in accordance with 9VAC25-32-480 through 9VAC25-32-500 due to negligence of responsibilities by the certified land applicator;"	Revise - References incorrect and not needed in this section. Revise to read: "3. Failing to ensure that land application of biosolids complies with permit requirements in accordance with 9VAC25-32-480 through 9VAC25-32-500 due to negligence of responsibilities by the certified land applicator;"
	9VAC25-32-770		Add new Article header: " <u>Article 6 Liability Requirements for Transport, Storage, and Land Application of Biosolids</u> "
	9VAC25-32-770		Add new section header: " <u>9VAC25-32-770. Definitions.</u> "
	9VAC25-32-770		Add text related to definitions section: " <u>The following terms are used in the specifications for liability insurance and the financial liability coverage. The definitions contained in this section are intended to assist in the understanding of these requirements and are not intended to limit the meanings of terms in a way that conflicts with general insurance industry usage or with generally accepted accounting practices.</u> "
	9VAC25-32-770		Add definition: " <u>Assets</u> " means all existing and all probable future economic benefits obtained or controlled by a particular entity.
	9VAC25-32-770		Add definition: " <u>Current assets</u> " means cash or other assets or resources commonly identified as those that are

			<u>reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of a particular entity.</u>
	9VAC25-32-770		Add definition: <u>"Current liabilities" means obligations whose liquidation is reasonably expected to require the use of existing resources properly classified as current assets or the creation of other current liabilities.</u>
	9VAC25-32-770		Add definition: <u>"Independently audited" means an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.</u>
	9VAC25-32-770		Add definition: <u>"Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.</u>
	9VAC25-32-770		Add definition: <u>"Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.</u>
	9VAC25-32-770		Add definition: <u>"Local government" means a county, city, or town or any authority, commission, or district created by one or more counties, cities, or towns.</u>
	9VAC25-32-770		Add definition: <u>"Net working capital" means current assets minus current liabilities.</u>
	9VAC25-32-770		Add definition: <u>"Net worth" means total assets minus total liabilities and is equivalent to owner's equity.</u>
	9VAC25-32-770		Add definition: <u>"Substantial business relationship" means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the permit holder is demonstrated to the satisfaction of the department.</u>
	9VAC25-32-770		Add definition: <u>"Tangible net worth" means the tangible assets that remain after</u>

			<u>deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.</u>
	9VAC25-32-780		Add section to address liability requirements: " <u>9VAC25-32-780. Liability requirements.</u> "
	9VAC25-32-780 A		Add subsection to clarify requirements: " <u>A. A permit holder or applicant must demonstrate financial responsibility for clean-up costs, personal injury, bodily injury, and property damage resulting from the transport, storage, and land application of biosolids in Virginia. The permit holder or applicant must have and maintain pollution liability and general liability coverage in the amount of \$2 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs.</u> "
	9VAC25-32-780 B		Add subsection to clarify requirements: " <u>B. The permit holder or applicant may demonstrate the required liability coverage by using one of the mechanisms specified below.</u> "
	9VAC25-32-780 B 1		Add subdivision to clarify requirements: " <u>1. A Pollution Liability policy as well as a General Liability policy that covers all activities associated with the "Transport, Storage, and Land Application" of biosolids as specified in 9VAC25-32-790;</u> "
	9VAC25-32-780 B 2		Add subdivision to clarify requirements: " <u>2. Passing a corporate financial test as specified in 9VAC25-32-800 or using the corporate guarantee for liability coverage as specified in 9VAC25-32-810;</u> "
	9VAC25-32-780 B 3		Add subdivision to clarify requirements: " <u>3. Passing a local government financial test as specified in 9VAC25-32-820 or using the local government guarantee for liability coverage as specified in 9VAC25-32-830;</u> "
	9VAC25-32-780 B 4		Add subdivision to clarify requirements: " <u>4. Obtaining a letter of credit for liability coverage as specified in 9VAC25-32-840; or</u> "
	9VAC25-32-780 B 5		Add subdivision to clarify requirements: " <u>5. Obtaining a trust fund for liability coverage as specified in 9VAC25-32-850.</u> "
	9VAC25-32-780 C		Add subsection to clarify requirements: " <u>C. The permit holder or applicant shall notify the department in writing within 30 days whenever.</u> "

	9VAC25-32-780 C 1		Add subdivision to clarify requirements: " <u>1. A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in this section;</u> "
	9VAC25-32-780 C 2		Add subdivision to clarify requirements: " <u>2. A certification of valid claim for bodily injury or property damage caused by the transport, storage, or land application of biosolids in Virginia is entered between the owner or operator and a third-party claimant for liability coverage in this section; or</u> "
	9VAC25-32-780 C 3		Add subdivision to clarify requirements: " <u>3. A final court order establishing a judgment for bodily injury or property damage caused by the transport, storage, or land application of biosolids in Virginia is issued against the permit holder or applicant or an instrument that is providing financial assurance for liability coverage authorized in this section.</u> "
	9VAC25-32-790		Add new section: " <u>9VAC25-32-790. Liability insurance.</u> "
	9VAC25-32-790 A		Add new subsection to clarify requirements: " <u>A. Each pollution and general liability insurance policy must be amended by attachment of an endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to that specified in the Biosolids Liability Endorsement form. The wording of the certificate of insurance must be identical to that specified in the Certificate of Liability Insurance form. The permit holder or applicant must submit a signed duplicate original of the endorsement or the certificate of insurance to the department. If requested by the department, the permit holder or applicant must provide a signed duplicate original of the insurance policy. An applicant for a new permit must submit the signed duplicate original of the biosolids liability endorsement or the certificate of liability insurance to the department at least 60 days before the initial application of biosolids. The insurance must be effective before the initial application of biosolids.</u> "

	9VAC25-32-790 B		Add new subsection to clarify requirements: " <u>B. Each insurance policy must be insured by an insurer that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in Virginia and the insurer shall be in good financial position, as demonstrated by the AM Best (A++, A+, A-, B++, B+), Standard and Poor's (AAA, AA, A, BBB) or Moody's (Aaa, Aa, A, Baa) financial strength ratings.</u> "
	9VAC25-32-800		Add new section: " <u>9VAC25-32-800. Corporate financial test.</u> "
	9VAC25-32-800 A		Add new subsection: " <u>A. A permit holder or applicant may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this section. To pass this test the permit holder or applicant must meet the criteria of subsection B of this section.</u> "
	9VAC25-32-800 B		Add new subsection: " <u>B. A permit holder or applicant must have:</u> "
	9VAC25-32-800 B 1		Add new subdivision: " <u>1. Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test, and a tangible net worth of at least \$10 million; or</u> "
	9VAC25-32-800 B 2		Add new subdivision: " <u>2. A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's and a tangible net worth of at least \$10 million; and a tangible net worth of at least six times the amount of liability coverage to be demonstrated by this test; and assets in the United States amounting to either:</u> "
	9VAC25-32-800 B 2 a		Add new subdivision: " <u>a. At least 90% of this total assets; or</u> "
	9VAC25-32-800 B 2 b		Add new subdivision: " <u>b. At least six times the amount of liability coverage to be demonstrated by this test.</u> "
	9VAC25-32-800 B 3		Add new subdivision: " <u>3. For the purposes of this section, the phrase "amount of liability coverage" refers to the annual aggregate amounts for which coverage is required under 9VAC25-32-780 A.</u> "

	9VAC25-32-800 C		Add new subsection: " <u>C. To demonstrate that he passes this test, the permit holder or applicant must submit the following three items to the department:</u> "
	9VAC25-32-800 C 1		Add new subdivision: " <u>1. A letter signed by the permit holder or applicant's chief financial officer:</u> "
	9VAC25-32-800 C 2		Add new subdivision: " <u>2. A copy of the independent certified public accountant's report on examination of the permit holder or applicant's financial statements for the latest completed fiscal year; and</u> "
	9VAC25-32-800 C 3		Add new subdivision: " <u>3. A special report from the permit holder or applicant's independent certified public accountant to the permit holder or applicant stating that:</u> "
	9VAC25-32-800 C 3 a		Add new subdivision: " <u>a. He has compared the data that the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and</u> "
	9VAC25-32-800 C 3 b		Add new subdivision: " <u>b. In connection with that procedure, no matters came to his attention that caused him to believe that the specified data should be adjusted.</u> "
	9VAC25-32-800 D		Add new subsection: " <u>D. A new permit holder or new applicant must submit the items specified in subsection C of this section at least 30 days before the date on which the biosolids are first applied.</u> "
	9VAC25-32-800 E		Add new subsection: " <u>E. After the initial submission of the items specified in subsection C of this section, the permit holder or applicant must send updated information to the department within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in subsection C of this section.</u> "
	9VAC25-32-800 F		Add new subsection: " <u>F. If the permit holder or applicant no longer meets the requirements of subsection B of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of the required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the department within</u> "

			<p><u>90 days after the end of the fiscal year for which the year-end financial data show that the permit holder or applicant no longer meets the test requirements."</u></p>
	9VAC25-32-800 G		<p><u>Add new subsection: "G. The department may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on an examination of the permit holder's or applicant's financial statements. An adverse opinion or a disclaimer of opinion may be cause for disallowance. The department will evaluate other qualifications on an individual basis. The permit holder or applicant must provide evidence for the entire amount of the required liability coverage as specified in this section within 30 days of notification of disallowance."</u></p>
	9VAC25-32-810		<p><u>Add new section: "9VAC25-32-810. Corporate guarantee."</u></p>
	9VAC25-32-810 A		<p><u>Add new subsection: "A. A permit holder or applicant may meet the requirements of this section by obtaining a written guarantee, hereafter referred to as "guarantee". The guarantor must be the direct or higher-tier parent corporation of the permit holder or the applicant; a firm whose parent corporation is also the parent corporation of the permit holder or applicant; or a firm with a substantial business relationship with the permit holder or applicant. The guarantee must meet the requirements for the permit holder or applicant as specified in 9VAC25-32-800. A certified copy of the guarantee must accompany the items sent to the department as specified in 9VAC25-32-800 C. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the permit holder or the applicant, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a substantial business relationship with the permit holder or applicant, this letter must describe this substantial business relationship and the value received in consideration of the guarantee."</u></p>

	9VAC25-32-810 B		Add new subsection: " <u>B. If the permit holder or applicant fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by the transport, storage, or land application of biosolids in Virginia or fails to pay an amount agreed to in a settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.</u> "
	9VAC25-32-810 C		Add new subsection: " <u>C. The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the permit holder or applicant and to the department. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the permit holder or applicant and the department, as evidenced by return receipts.</u> "
	9VAC25-32-810 D		Add new subsection: " <u>D. If a guarantee is cancelled, the permit holder or applicant shall, within 90 days following receipt of the cancellation notice by the permit holder or applicant and the department, obtain alternate financial assurance and provide evidence of that alternate financial assurance to the department. If the permit holder or applicant fails to provide evidence of alternate financial assurance within 120 days following the close of the guarantor's fiscal year; obtain alternate assurance acceptable to the department; and provide evidence of the alternate assurance to the department.</u> "
	9VAC25-32-810 E		Add new subsection: " <u>E. Recordkeeping and reporting.</u> "
	9VAC25-32-810 E 1		Add new subdivision: " <u>1. The permit holder or applicant shall submit a signed original guarantee to the department along with the items required under 9VAC25-32-800 C. The guarantee shall be worded as specified on the Corporate Guarantee form.</u> "
	9VAC25-32-810 E 2		Add new subdivision: " <u>2. The permit holder or applicant is no longer required to maintain the items specified in 9VAC25-32-800 C when:</u> "
	9VAC25-		Add new subdivision: " <u>a. The permit holder</u>

	32-810 E 2 a		<u>or applicant substitutes alternative financial assurance as specified in this section; or"</u>
	9VAC25-32-810 E 2 b		<u>Add new subdivision: "b. The permit holder or applicant is released from the requirements of this chapter."</u>
	9VAC25-32-810 F		<u>Add new subsection: "F. If a guarantor no longer meets the requirements specified in this section, the permit holder or applicant shall, within 90 days following close of the guarantor's fiscal year, obtain alternate financial assurance acceptable to the department and submit evidence of the alternate financial assurance to the department. If the permit holder or applicant fails to provide alternate financial assurance within the 90-day period, the guarantor shall provide that alternate financial assurance within 120 days."</u>
	9VAC25-32-820		<u>Add new section: "9VAC25-32-820. Local government financial test."</u>
	9VAC25-32-820 A		<u>Add new subsection: "A. A permit holder or applicant that satisfies the requirements if this section may demonstrate financial assurance using the local government financial test."</u>
	9VAC25-32-820 B		<u>Add new subsection: "B. The permit holder or applicant shall satisfy the provisions of this section as applicable:"</u>
	9VAC25-32-820 B 1		<u>Add new subdivision: "1. If the permit holder or applicant has outstanding, rated general obligations bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, he shall supply the department with documentation demonstrating that the permit holder or applicant has a current rating of Aaa, Aa, A, or Baa as issued by Moody's or AAA, AA, A, or BBB as issued by Standard and Poor's on all such general obligation bonds; or"</u>
	9VAC25-32-820 B 2		<u>Add new subdivision: "2. If the permit holder or applicant does not have outstanding, rated general obligation bonds, he shall satisfy each of the following financial ratios based on the permit holder's or applicant's most recent audited annual financial statements:"</u>
	9VAC25-32-820 B 2 a		<u>Add new subdivision: "a. A ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05;</u>

			and".
	9VAC25-32-820 B 2 b		Add new subdivision: " <u>b. A ratio of annual debt service to total expenditures less than or equal to 0.20.</u> "
	9VAC25-32-820 C		Add new subsection: " <u>C. The permit holder or applicant shall prepare his financial statements in conformity with generally accepted accounting principles for governments and have this financial statements audited by an independently certified public accountant or by the Auditor of Public Accounts.</u> "
	9VAC25-32-820 D		Add new subsection: " <u>D. A permit holder or applicant is not eligible to assure its obligations under this section if he:</u> "
	9VAC25-32-820 D 1		Add new subdivision: " <u>1. Is currently in default on any outstanding general obligation bonds;</u> "
	9VAC25-32-820 D 2		Add new subdivision: " <u>2. Has any outstanding general obligation bonds rated lower than Baa as issued by Moody's or BBB as issued by Standard and Poor's;</u> "
	9VAC25-32-820 D 3		Add new subdivision: " <u>3. Operated at a deficit equal to 5/0% or more of total annual revenue in each of the past two fiscal years; or</u> "
	9VAC25-32-820 D 4		Add new subdivision: " <u>4. Receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant or Auditor of Public Accounts auditing his financial statements as required under subsection C of this section. However, the department may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the department deems the qualification insufficient to warrant disallowance of the test.</u> "
	9VAC25-32-820 E		Add new subsection: " <u>E. The local government permit holder or applicant must submit to the department the following items:</u> "
	9VAC25-32-820 E 1		Add new subdivision: " <u>1. An original letter signed by the local government's chief financial officer stating that the permit holder or applicant meets the requirements of this section;</u> "
	9VAC25-32-820 E		Add new subdivision: " <u>2. The local government's independently audited year-</u>

	2		<u>end financial statements for the latest fiscal year, including the unqualified opinion of the auditor who must be an independent, certified public accountant or an appropriate state agency that conducts equivalent comprehensive audits;"</u>
	9VAC25-32-820 E 3		Add new subdivision: " <u>3. A report of the local government from the local government's independent certified public accountant or the Auditor of Public Accounts based on performing an agreed upon procedures engagement relative to the financial ratios required by subdivision B 2 of this section if applicable, and the requirements of this section. The certified public accountant's or state agency's report shall state the procedures performed and the certified public accountant's or state agency's findings; and"</u>
	9VAC25-32-820 E 4		Add new subdivision: " <u>4. A copy of the comprehensive annual financial report (CAFR) used to comply with subdivision B 2 of this section."</u>
	9VAC25-32-830		Add new section: " <u>9VAC25-32-830. Local government guarantee."</u>
	9VAC25-32-830 A		Add new subsection: " <u>A. A local government who is also the permit holder or applicant may meet the requirements of this section by providing a written guarantee, herein referred to as "guarantee" by a local government. The guarantor shall meet the requirements of the local government financial test in section 9VAC25-32-820 and shall comply with the terms of the written guarantee identified in subsection B of this section."</u>
	9VAC25-32-830 B		Add new subsection: " <u>B. Terms of the written guarantee."</u>
	9VAC25-32-830 B 1		Add new subdivision: " <u>1. The guarantee shall be effective before the initial application of biosolids and"</u>
	9VAC25-32-830 B 2		Add new subdivision: " <u>2. The guarantee shall provide that:"</u>
	9VAC25-32-830 B 2 a		Add new subdivision: " <u>a. If the permit holder or applicant fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by the transport, storage, or land application of biosolids in</u>

			<u>Virginia or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage;"</u>
	9VAC25-32-830 B 2 b		Add new subdivision: " <u>b. The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the permit holder or applicant and to the department. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the permit holder or applicant and the department, as evidenced by return receipts; and"</u>
	9VAC25-32-830 B 2 c		Add new subdivision: " <u>c. If a guarantee is cancelled, the permit holder or applicant shall within 90 days following receipt of the cancellation notice by the permit holder or the applicant and the department obtain alternate financial assurance and notify the department. If the permit holder or applicant fails to provide alternate financial assurance within the 90-day period, the guarantor shall provide that alternate financial assurance within 120 days following the close of the guarantor's fiscal year; obtain alternate financial assurance acceptable to the department; and submit evidence of that alternate financial assurance to the department."</u>
	9VAC25-32-830 C		Add new subsection: " <u>C. Recordkeeping and reporting."</u>
	9VAC25-32-830 C 1		Add new subdivision: " <u>1. The permit holder or applicant shall submit a signed original guarantee on the Local Government Guarantee form to the department along with the items required under 9VAC25-32-820 E before the initial application of biosolids."</u>
	9VAC25-32-830 C 2		Add new subdivision: " <u>2. The permit holder or applicant is no longer required to maintain the items specified in 9VAC25-32-820 E when:"</u>
	9VAC25-32-830 C 2 a		Add new subdivision: " <u>a. The permit holder or applicant substitutes alternate financial assurance as specified in this section; or"</u>
	9VAC25-32-830 C 2 b		Add new subdivision: " <u>b. The permit holder or applicant is released from the requirements of this section."</u>

	9VAC25-32-830 D		Add new subsection: " <u>D. If a local government guarantor is no longer meets the requirements of this section, the permit holder or applicant shall, within 90 days following the close of the guarantor's fiscal year, obtain alternate financial assurance acceptable to the department and submit evidence of that alternate financial assurance to the department. If the permit holder or applicant fails to provide alternate financial assurance within the 90-day period, the guarantor shall provide that alternate financial assurance within 120 days.</u> "
	9VAC25-32-840		Add new section: " <u>9VAC25-32-840. Letter of credit.</u> "
	9VAC25-32-840 A		Add new subsection: " <u>A. A permit holder or applicant may satisfy the requirements of this article by obtaining an irrevocable standby letter of credit that satisfies the terms of the letter of credit and by submitting the original letter of credit to the department.</u> "
	9VAC25-32-840 B		Add new subsection: " <u>B. Terms of the letter of credit.</u> "
	9VAC25-32-840 B 1		Add new subdivision: " <u>1. The letter of credit shall be effective before the initial application of biosolids.</u> "
	9VAC25-32-840 B 2		Add new subdivision: " <u>2. The issuing institution shall be a bank or other financial institution that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Commonwealth of Virginia, by a federal agency, or by an agency of another state.</u> "
	9VAC25-32-840 B 3		Add new subdivision: " <u>3. The letter of credit shall be irrevocable and issued for a period of at least one year in an amount of \$2 million to cover the costs for clean-up costs, personal injury, bodily injury, and property damage that may result from the transport, storage, or land application of biosolids in Virginia by the permit holder or applicant.</u> "
	9VAC25-32-840 B 4		Add new subdivision: " <u>4. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the current expiration date, it shall,</u>

			<p><u>at least 120 days before the date, notify both the permit holder or applicant and the department by certified mail of that decision. The 120-day period will begin on the date of receipt by the department as shown on the signed return receipt. Expiration cannot occur, however, while an enforcement action is pending. Within 60 days of receipt of notice from the issuing institution that it does not intend to extend the letter of credit, the permit holder or applicant shall obtain alternate financial assurance and submit evidence of the alternate financial assurance to the department."</u></p>
	9VAC25-32-840 C		<p>Add new subsection: "<u>C. In the event of failure of the permit holder or applicant to comply with the requirements of this article, the department may cash the letter of credit."</u></p>
	9VAC25-32-840 D		<p>Add new subsection: "<u>D. The permit holder or applicant may cancel the letter of credit only if alternate financial assurance acceptable to the department is substituted as specified in this article or if the permit holder or applicant is released by the department from the requirements of this chapter."</u></p>
	9VAC25-32-840 E		<p>Add new subsection: "<u>E. The department shall return the original letter of credit to the issuing institution for termination when:"</u></p>
	9VAC25-32-840 E 1		<p>Add new subdivision: "<u>1. The permit holder or applicant substitutes acceptable alternate financial assurance for clean-up costs, personal injury, bodily injury, and property damage resulting from the transport, storage, or land application of biosolids in Virginia; or"</u></p>
	9VAC25-32-840 E 2		<p>Add new subdivision: "<u>2. The department notifies the permit holder or applicant that he is no longer required by this article to maintain financial assurance for clean-up costs, personal injury, bodily injury, and property damage resulting from the transport, storage, or land application of biosolids in Virginia."</u></p>
	9VAC25-32-840 F		<p>Add new subsection: "<u>F. The permit holder or applicant shall establish a standby trust fund. The standby trust fund shall meet the requirements of 9VAC25-32-850, except</u></p>

			<u>the requirements for initial payments and subsequent annual payments."</u>
	9VAC25-32-840 G		Add new subsection: " <u>G. Payments made under the terms of the letter of credit will be deposited by the issuing institution directly into the standby trust fund. Payments from the trust fund shall be approved by the department."</u>
	9VAC25-32-840 H		Add new subsection: " <u>H. The department may cash the letter of credit if it is not replaced 30 days prior to expiration with alternate financial assurance approved by the department."</u>
	9VAC25-32-840 I		Add new subsection: " <u>I. The wording of the letter of credit shall be identical to that specified in the Letter of Credit form."</u>
	9VAC25-32-850		Add new section: " <u>9VAC25-32-850. Trust fund."</u>
	9VAC25-32-850 A		Add new subsection: " <u>A. A permit holder or applicant may satisfy the requirements of this article by establishing a trust fund that conforms to the requirements of subsection B of this section and submitting an originally signed duplicate of the trust agreement to the department."</u>
	9VAC25-32-850 B		Add new subsection: " <u>B. Trust fund requirements."</u>
	9VAC25-32-850 B 1		Add new subdivision: " <u>1. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by the Commonwealth of Virginia, by a federal agency, or by an agency of another state."</u>
	9VAC25-32-850 B 2		Add new subdivision: " <u>2. The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created, the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the permit holder or applicant, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to be equal to the full amount of the liability coverage to be provided, or obtain other alternate financial assurance as specified in this section to cover the difference."</u>

	9VAC25-32-850 B 3		Add new subdivision: " <u>3. For purpose of this section, "the full amount of liability coverage provided" means the amount of coverage for clean-up costs, personal injury, bodily injury, and personal damage resulting from the transport, storage, or land application of biosolids in Virginia.</u> "
	9VAC25-32-850 B 4		Add new subdivision: " <u>4. The wording of the trust fund must be identical to that specified in the Trust Fund form.</u> "
9VAC25-32 FORMS		FORM: "Virginia Pollution Abatement Permit Application, Form D, Municipal Effluent and Biosolids (rev. 4/09)"	Revise to list the Form D's existing multiple parts and revised parts: " <u>Virginia Pollution Abatement Permit Application, Form D, Municipal Effluent and Biosolids: Part D-I: Land Application of Municipal Effluent (rev. 4/09); Part D-II: Land Application of Biosolids (rev. 4/09); Part D-III: Effluent Characterization Form (rev. 4/09); Part D-IV: Biosolids Characterization Form (rev. 4/09); Part D-V: Non-Hazardous Waste Declaration Form (rev. 4/09); D-VI: Land Application Agreement – Biosolids and Industrial Residuals (rev. 10/11); Part D-VII: Request for Extended Setback from Biosolids Land Application Field (rev. 10/11).</u>
FORMS (9VAC25-32)		"Application for a Biosolids Use Permit, 2007."	Delete form - no longer needed.
FORMS (9VAC25-32)			Add form: " <u>Sludge Disposal Site Dedication Form, Form A-1 (rev. 11/09).</u> "
FORMS (9VAC25-32)			Add form: " <u>Biosolids Land Application Local Monitoring Expenses Reimbursement Invoice, Form 1 (rev. 5/10).</u> "
FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form I, Insurance Liability Endorsement (rev. 11/09).</u> "
FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form II, Certificate of Liability Insurance (rev. 11/09).</u> "
FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form III, Corporate Letter (rev. 11/09).</u> "
FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form IV, Corporate Guarantee (rev. 11/09).</u> "

FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form V, Letter of Credit (rev. 11/09).</u> "
FORMS (9VAC25-32)			Add form: " <u>Liability Requirements for Transport, Storage, and Land Application of Biosolids, Form VI, Trust Agreement (rev. 11/09).</u> "
DOCUMENTS INCORPORATED BY REFERENCE (9VAC25-32)			Add document: " <u>Glossary-Water and Wastewater Control Engineering, 1969, American Public Health Association (APHA), American Society of Civil Engineering (ASCE), American Water Works Association (AWWA), and the Water Environment Federation (WEF).</u> "
DOCUMENTS INCORPORATED BY REFERENCE (9VAC25-32)			Add document: " <u>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (1986) as amended by final updates I, II, IIA, IIB, IIIA, IIIB, IVA, and IVB, National Technical Information Service, Springfield, Virginia.</u> "

Enter any other statement here

Regulatory flexibility analysis

Please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

The options for regulatory flexibility were limited in this action due to applicable federal law and regulation and state law. Reporting and recordkeeping requirements were generally limited to what was required in federal regulation. Changes to operational standards were developed based on deliberations of the Technical Advisory Committee in order to minimize impact on small businesses.

Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage

economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

While no impact on the institution of family and family stability is anticipated with these amendments, altering the requirements to use biosolids as a free nutrient source could impact the disposable income of farm families choosing this method of fertilization.

ATTACHMENT A - COMMENT SUMMARY AND RESPONSE**INTRODUCTION**

During the public comment period on the proposed regulation, held between March 1, 2011 and April 29, 2011, DEQ received 181 written comments and at the 4 public hearings, 107 oral comments. Comments were received from citizens, local government, utilities and industry. DEQ staff sorted those comments and extracted individual topics addressed by each commenter, resulting in over 1,100 individual comments.

Those individual comments are presented below in general subject categories. DEQ's response to the comments within each subject is presented below all of the comments on the subject. There were some comments that identified a specific citation in the regulation, and each of those comments has been answered individually under Regulatory Citations. The comments are presented alphabetically by subject and commenter's last name.

The staff has made a good faith effort to address each of the comments. However, due to the complexity of many of the comments, a specific point not addressed in the response to a general category may be addressed elsewhere in the document, under another category or under the Regulatory Citation responses.

DEQ requested final approval of the regulatory amendments at a regular meeting of the State Water Control Board on September 22, 2011. After hearing the DEQ staff presentation and public comment, the Board requested additional amendments to the regulation. Details regarding the Board amendments are included following the associated responses.

Subject: [Alternative Uses for Biosolids](#)

Commenter: Eveland, Pat, representing Citizens

I would like to associate myself with the comments made by Dave Gibson. There is no way to guarantee that every application of sludge is safe. Not everything that goes down our drains can be safely sanitized for use on our food. To equate sludge to what we normally think of as biosolids is just an attempt to fool the public. Let's concentrate on finding alternative uses for

human waste rather than risking the health of our people.

Commenter: Hassan, Khalil, representing Citizens

Instead of spending limited resources discussing setbacks, fee schedules, etc., maybe those resources should be used to find viable alternative uses like converting it to energy. Or a testing protocol that goes far beyond what EPA has done. The agricultural community and citizens of the Commonwealth have a right to know what hazards they are being exposed to be it airborne pathogens, plant uptake or polluted waterways.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ notes incineration and landfill are two alternatives to spreading sewage sludge over farmland. However, DEQ fails to mention sewage sludge is an alternative energy source. Sewage sludge is a valuable and sustainable hydrocarbon source for energy which can replace crude imports currently over \$100 per barrel.

Commenter: Lorien, Joy, representing Citizens

Myth: There are no other solutions to our septage and sludge disposal crisis. Fact: Sludges and other nonrecyclable wastes can and are being used beneficially as a renewable source of clean energy without environmental impacts.

Commenter: Musick, H. Glen, representing Citizens

Perhaps we should be building electrical power plants that could use this material as a fuel source.

Commenter: Scholder, Jerry, representing W.O.R.M.S. (Worms Operating to Reduce Municipal Sludge)

What I do object to is when Class B biosolids are being dumped into a landfill at considerable expense and harm to the environment while wasting a potentially valuable resource for our land.

I will readily admit that I do not like the idea of Class B biosolids being applied to lands when they could be converted to Class A biosolids with very little additional effort or expense.

This committee needs to be more proactive in researching and encouraging solutions pertaining to recycling of biosolids. Not one person made mention of an innovative, affordable, and environmentally sound method called vermicomposting or vermistabilization of sludge. It makes no sense at all to me to put any class of biosolids onto soils without inoculating that soil with earthworms first. The vermistabilization process on biosolids results in a converted biosolids that meets Part 503 Class A PFRP requirements.

Commenter: Van Drie, Gerhardt, representing Van Drie Trenching

One way to handle the hazards of the unknown toxics in sludge is to confine sludge disposal to as small of an area as possible. It can be done economically by using the Van Drie Trenching Process. Find a ground area where the water table is 20 feet below surface ground level. Trench disposal prevents the sludge from getting to surface waterways where cities

obtain their water supply.

DEQ Response to Comments: Alternative Uses for Biosolids

Alternative disposal technologies are still in development in Virginia. House Joint Resolution 694 directed the Biosolids Expert Panel to investigate the capacity of alternative technologies to facilitate the beneficial use of biosolids and their disposal. The Panel discussed many different technologies and the benefits and obstacles of each. The Panel noted that adoption of alternative technologies is often hindered by cost and lack of performance history. Additionally, the overall environmental risk of energy producing technologies has not been proven to be less than that of land application. The Biosolids Expert Panel recommended that additional research and engineering analyses of alternative technologies is needed to fully evaluate the risk-benefit and cost-benefit. At the present time, land application is a viable reuse of biosolids that has been shown to be protective of the environment when applicable laws and regulations are followed.

Subject: [Buffers and Setbacks, Health and Odor Related Setback Extensions](#)

Commenter: Anderson, Paul, representing Farmers

Concerned with the drastic buffers being proposed in the draft regulations. There is very little runoff from the application of biosolids. There needs to be a scientific basis for the buffers. There is no evidence for the need for a 400 foot buffer. There needs to be common sense and scientific evidence on these changes, rather than arbitrarily making the changes. Encourage you to look at the use of biosolids and don't over-regulate it.

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

VPA-01579 was approved in spite of the presence of three public gathering attractions entirely within or immediately adjacent to, one of the approved land segments: the North Fork of the Shenandoah River, the publicly owned Meems Bottom Covered Bridge, and a privately owned corn maze. The regulations should require obtaining local government certification for any proposed permit or permit modifications for the land application or storage of biosolids to verify the site(s) and proposed application activity are not proximate to public use areas.

Commenter: Baird, Benjamin, representing Farmers

Can't say anything that hasn't been expressed here tonight. My family has been in the farming business in Virginia since 1839. My two sons will be the 3rd generation raised on a farm using biosolids. The "sludge line" in a field is where you find a drop off in land productivity. There is not a lot that a farmer can do except try to apply enough commercial fertilizers to make up the difference but you end up with runoff of the nutrients. If you allow for the option of a 400 foot buffer to an adjacent property owner, it will become mandatory. They will think that it will do something to eliminate the odor associated with biosolids, but it won't, it what it is. The application of biosolids increases the land's productivity. When you are putting

down biosolids there is someone there overseeing the operation? During the application of commercial fertilizers there is no oversight. I echo what has already been stated tonight by other speakers.

Commenter: Bates, J. Barry, representing Farmers

Would like to see the buffers shrunk down. I am in the position that not only does every acre but every foot makes a difference.

Commenter: Beasley, K.M., representing Farmers

Have used biosolids on a small farm in Buckingham County. Never had a problem with neighbors. Odors are always an issue, but increased setbacks do not affect that at all. Use of biosolids has improved the quality of sods on the farm lands in Virginia.

Commenter: Bowen, James, representing Farmers

I farm about 4000 acres in Culpeper County. Have been using sludge about as long as it has been available and never had a problem. I am against the restrictions and increased buffers. The larger buffers will do more harm than good and will result in the increased use of commercial fertilizers. Farmers usually apply more commercial fertilizers than needed so they don't have to reapply. Suggest that we bring back the concept and use of the Rain Fall Simulators. They showed clearly that there was no movement of materials in those areas using biosolids, but the materials were washed away when commercial fertilizers were applied. Sludge does not move very much once applied. I am against larger buffers.

Commenter: Bowen, Maxwell, representing Farmers

I am from Fauquier County. I am all for sludge. The buffer zones are getting too wide. We are losing a lot of land. That is not doing anybody any good. I have used biosolids for the last 15 years and have had no health effects from the application of biosolids. I just can't get enough of it.

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

The TAC discussion included the following limitations: (1) the request for the increased buffer can only come from an adjacent owner or occupant of a dwelling (not a property owner "in the vicinity" of a biosolids land application site, as described in the Guidance at p. 3); (2) the buffer area may be increased based on site-specific criteria; the amount of the increase should be limited to the minimum amount necessary to address the site-specific criteria but cannot exceed 200 feet; and (3) during the application process the request may be made in any manner; once the permit has been issued, the request must be made to DEQ and processed in accordance with VA Code § 62.1-44.19:3 (E) and (O). HRSD is concerned that the proposed regulatory language does not capture the TAC agreement.

To reflect the TAC agreement, Footnote 3 of Table 2 should read: "Buffer may be extended up to an additional 200 feet by the department and incorporated into the permit at the time it is issued based upon documented site specific conditions raised by the occupant of the dwelling and identified during the permit application review process consistent with 9VAC25-32-560 B 3 (f) (4). The buffer may be extended further by the department if the regional health director certifies that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury

to the health of an individual. Extended buffers do not run with the land, and will be invalid for subsequent occupants of the dwelling."

To reflect the TAC agreement, Footnote 4 of Table 2 should read: "Should the Department receive a written request to extend the buffer beyond the 200 feet after the permit has been issued, such an extension will only be granted after notification to the applicator. Such extensions may require approval for additional storage time and other operational adjustments. In all circumstances, the buffer will not be extended more than an additional 200 feet unless the applicator consents to such extension. If a property owner or occupant living in a dwelling adjacent to a land application site for a buffer extension to address an individual health concern, the Department Buffer may offer in response an extension up to a maximum of 400 feet. A request for an extended buffer must be received by the Department and communicated to the permit holder no later than twenty-four hours before land application commences on the site adjacent to the occupied dwelling. Requests received within twenty-four hours of application will be treated as requests for a voluntary buffer extension by the permit holder consistent with 9VAC25-32-560 B 3 (h). Buffer may exceed 400 feet where an evaluation by the Virginia Department of Health determines that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual. Extended buffers do not run with the land, and will be invalid for subsequent property owners or occupants.

To reflect the TAC agreement, item f.(3) dealing with waivers should read: (3) Waivers. Waivers from adjacent property residents and or landowners may only be used to reduce buffer distances from occupied dwellings and/or property lines with the presence of an occupied dwelling.

To reflect the TAC agreement, item f.(4) dealing with extended buffer setback distances should read: (4) Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes, identified during the permit application review process. Any such buffer increase shall be incorporated into the permit at the time it is issued. For applications where surface applied biosolids are not incorporated, the department (or the local monitor with approval of the department) may require as a site-specific permit condition, extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances from odor sensitive receptors may be extended to 400 feet or more and no biosolids shall be applied within such extended buffer zones. In accordance with 9VAC25-32-100 and 9VAC25-32-490, the board may impose standards and requirements that are more stringent when required to protect public health and the environment, or prevent nuisance conditions from developing, either prior to or during biosolids use operations.

Commenter: Boyd, Claire, representing Farmers

Concerned about the proposed buffers. The increase of the buffers to 400 feet would take out about 75% of area on our farm that we can apply biosolids. I have never read where an odor causes an illness or health effect. We need to promote the valuable use of biosolids, instead of restricting it. It is so much better than the use of commercial fertilizer.

Commenter: Broaddus, C. Bates, representing Farmers

Increasing regulations and buffers are a useless and unnecessary burden on our farm, and science and research has proven that current regulations and buffers are sufficient to meet health concerns. If buffers are allowed to be 400 feet, then soon that will be the required distance. This will mean many small fields will not get biosolids because it will not be worth the effort.

Commenter: Broaddus, John, representing Farmers

Increasing regulations and buffers are nothing but underhanded ways to try to ban biosolids. Besides buffers make it more difficult to manage my field by creating a small strip that must be fertilized separately and never will match the rest of the field. So please do not allow the buffers to be increased to 400 feet, especially when there is no evidence to support this move.

Commenter: Broaddus, Lynwood, representing Farmers

Adding more regulations and increasing buffers are merely underhanded ways to ban a safe and beneficial recycled product. Buffers create added problems because it creates a separate field, which will never be as productive as the rest of the field.

Very pleased with the use of biosolids. Have used biosolids for several years. The proposed increase in buffers is a concern. A field with an area where biosolids is applied and an area (buffer) where biosolids is not applied looks like two separate fields. The 200 feet is a courtesy and is appropriate. The increase of the buffer from 200 to 400 feet is only going to make the handling and management of the nutrient levels in the field that much more difficult.

Commenter: Chambers, Jennifer, representing Virginia Agribusiness Council

DEQ's proposed automatic extension of buffers beyond the current requirement of 200 feet from an occupied dwelling is an issue of great concern for landowners who utilize biosolids. Unnecessary expansion of buffers to provide extra comfort to those who are concerned about biosolids applications causes real economic and production hardship for landowners who are receiving biosolids, with no scientific or environmental basis for the decision. Each time a buffer is extended, it practically means that less land within a tract can be utilized for biosolids application. For smaller farms and tracts of land, this may result in a loss of economic benefit for the farm or land application company to apply biosolids on the site. For the Commonwealth as a whole, this means more land elsewhere will need to be permitted and have biosolids applied to it, or that other, more costly, means of disposal of solids must be utilized. During the TAC process, it was agreed that the size of the buffer could be extended up to an additional 200 feet by DEQ based on documented site-specific conditions. This was not to be an automatic extension, but rather a considered decision by DEQ based on information presented by the occupant of a dwelling on adjacent property. The extension should not automatically increase the buffer to 400 feet, but rather only by the amount necessary to address the site-specific concern. Additionally, it was agreed that the buffer could be extended beyond 400 feet if the regional health director evaluates and certifies that such an extension is necessary to prevent specific and immediate injury to the health of an individual. DEQ should set a period of time by which the buffer extension request and subsequent decision must be made and the applicator notified prior to applications commencing. This will allow the applicator and the farmer to address alternative storage and transportation of product if necessary. DEQ should reconsider and amend its recently adopted guidance (Water Guidance Memo No. 10-2004, Revision 1

Implementation of Extended Buffers, Coordination of Health Complaints and Waiving of Buffers at Biosolids Land Application Sites, January 5, 2011), which utilizes a presumption in favor of extending the buffer to a blanket 400 feet upon request. Instead, DEQ should rely upon a case-by-case decision and based upon site-specific conditions to extend the buffer up to a maximum of 400 feet total, unless requested and certified by the regional Health Director to be further.

Commenter: Davis, Jr., Ivan P., representing Farmers

Before deciding to use biosolids, I talked to neighbors and researched and studied the use of biosolids. Have used biosolids for 9 years. The use of biosolids has enabled me to keep the farm as a farm. The farm teams with wildlife. Have had no issues from the use of biosolids. Greatly concerned with the proposal to increase the buffers and setbacks to 400 feet. The current rules and regulations have been effective. The use of biosolids is a benefit to us, the environment, and our neighbors. In 2009 the farm received the Chesapeake Bay Improvement Award - Clean Water Award.

Commenter: Elliott, Jr., Carter S., representing Farmers

Extending the buffers beyond what is necessary; just to provide some people with an extra level of comfort is in my opinion harming all farms. Small farms especially will be affected, as it may not be feasible for the land application company to haul in his equipment for just a few acres here and there. As a result, the land does not get needed nutrients thus leading to a decline in that farm's productivity. In many cases the use of biosolids provides the difference between farm profitability and farm foreclosure. If restrictions are placed on farmers who have been farming for generations to provide new neighbors with an added comfort level, then the farm fails and our rural community will soon get paved over. To put restriction after restriction on the farms are increasingly making it harder for them to stay in business. When you hurt farming, you hurt the entire economy of Virginia. Please don't do anything to further hurt the farmers of Virginia.

Commenter: Fraizer, Katie, representing Virginia Agribusiness Council

I was a member on the regulatory advisory panel for the development of these regulations. I want to thank DEQ and staff for their professionalism and for all of their work on these regulations and working with the agricultural community. As it has been previously stated biosolids is a valuable resource for farmers and the agricultural industry in Virginia. Agriculture and Forestry are the number one industries in Virginia and rely on this product. I agree with the comments made on the buffers tonight. We will be submitting additional comments regarding amendments and minor tweaks to the regulations. Would welcome and encourage the use of a reconvened TAC to consider the recommendations made during the public comment period. We would appreciate the opportunity to work with DEQ in that phase of this effort. We support the biosolids use in the Commonwealth and would like to see this program to be user friendly and scientifically based and one that will allow the continued use of biosolids in the commonwealth wisely and safely.

Commenter: Garber, Jonathan, representing Farmers

Have a small farm in Augusta County. The farm has been in production since 1840. We have applied biosolids on 22 acres for 15 years and have nothing but good to say about the

product and its impact on the fields. There have been no complaints or issues associated with our use of biosolids. Increasing the setbacks from 200 to 400 feet no cause buffer will have a drastic impact on the ability of a farmer to apply biosolids. There is no basis for this increased buffer. If it is increased we would no longer be able to apply biosolids to our fields. Our farm is under a Nutrient Management Plan. Urge the adoption of a set of regulations that requires adjacent landowners to show cause for requesting an expanded buffer. This should be based on scientific facts and/or medical conditions. Don't allow emotion or supposition masquerading as scientific fact to take the place of due scientific process.

Commenter: Gardner, Susan, representing Farmers

Veterinary in Bedford County - In practice since 1970 - Never seen an animal hurt or damaged by anything related to the use or application of biosolids. Urge that the regulation consider the science and not be diverted by emotions.

Commenter: Graf, Mary, representing Citizens

According to VDH Dr. Dwight Flammia, "the health department did not sponsor a study to determine what buffer length was appropriate for residences located near biosolids land application sites." He says that most likely, current scientific literature was reviewed, but there is no record of what parameters were used in deciding on the 100-400 foot buffers that are offered. According to another VDH physician, Mark Levine, regarding the issue of defining a safe buffer, "There is no systematic support for the buffers currently in use." He goes on to put forth a 1 1/2 mile buffer from dwellings, churches, schools, etc., based on the distance of the majority of complaints arising from sludge applications. In stark contrast, another VDH physician, Dr. James Burns, suggests that 400 feet is sufficient buffer for anyone, with any condition, "unless their heart is hanging outside their body". The issue of safe buffers is a grave one. Until there is peer-reviewed scientific research on safe buffers, the precautionary approach needs to be implemented in the regulations, requiring at least a one-mile buffer for occupied dwellings in the vicinity of application sites. This very request was made by over two hundred Campbell County citizens in letters to the DEQ. The DEQ response was a form letter that ignored their request.

Two physicians with VDH, Mark Levine and Dwight Flammia, have declared that there is no scientific evidence that 200 - 400 ft. buffers are protective of health, and so the regulations do not conform to VA Code.

Commenter: Grove, Tim, representing Farmers

I would like to address the proposal to allow adjacent landowners to double the buffers around their homes and property lines without a cause. In a 2008 letter addressed to DEQ from VDH, VDH Deputy Commissioner James Burns writes, "There are no data indicating this increased caution is necessary, but we determined that providing these additional measures might make administering the program more practical...This should minimize the need for individual considerations." The recommended changes will burden land application contractors, Virginia farmers and ultimately the general public in order to lighten the work load for department employees -- all with Br. Burns' admission that there is no scientific or public health justification for the change. Increasing buffer zones will likely be interpreted by the public as a signal that the original distances were not protective. Extended buffers will not satisfy the

homeowners who persistently complain about biosolids, and the department will still need to make individual considerations for those residents. VA farmers will lose more acreage to the new setbacks - as much as 4 acres per adjoining house and some smaller fields will be rendered impractical for land application altogether. To replace those lost fields, biosolids contractors will have to permit new farms, engaging more neighboring residents and increasing the footprint of biosolids application in VA.

Commenter: Harris, W.D, representing Farmers

We already have enough regulations. All of these extra buffers just mess up the fertility of the field and we have to come back in with commercial fertilizers to try to manage the fertility of these buffers areas. Biosolids is the best soil builder that we have to put on the land. In areas where biosolids is not used, there will be a whole lot more runoff. With the use of biosolids you get a whole lot more earthworms and therefore more infiltration. Ask for no more regulations.

Commenter: Harvey, Albert W., representing Farmers

My wife and I own 290 acres in the northeast corner of Spotsylvania County with about 100 acres open. When we bought the first 187 acres in 1954, we did not know much about farming but it didn't take long to realize our land was very poor and to grow anything we had to fertilize as heavy as we could. In the last several years, as fertilizer has become more expensive we have stopped raising crops except for hay and pasture for livestock. We were so thankful when someone told us about the biosolids program. It has been a wonderful blessing financially and our fields look better. We have used biosolids on our land for 7 years in full compliance with all federal and state requirements and have not seen any adverse effects to our land, livestock, the wildlife, the water or our family. In addition, we have not had any complaints from our neighbors. Please do not regulate the biosolids program beyond what science and research require, especially in boundaries as all of these areas are non-productive.

Commenter: Hatcher, Roger, representing Farmers

Buffers should treat biosolids as any other commercially available fertilizer. The proposed buffers are designed primarily in an effort to control odor. When the wind is blowing there is no difference between a 10 foot buffer and a 400 foot buffer when looking at odor. The proposed regs are overly restrictive.

Buffers should treat biosolids as any other commercially available fertilizer. The proposed buffers are designed primarily in an effort to control odor. When the wind is blowing there is no difference between a 10 foot buffer and a 400 foot buffer when looking at odor. The proposed regs are overly restrictive. Comparing the acreage lost by increasing a buffer from 200 to 400 feet does not seem too significant on a square 100 acre field with housing along one road front. While this may be typical in some areas of Virginia, it is certainly not the norm. More likely you find situations where long narrow fields are bound by a road. Once totally agricultural, these roads are increasingly attracting development. The resulting impact on the agricultural field across the road is at least 200 feet. The proposed regulation make 400 ft. buffers very easy to obtain but with no scientific rationale. Even the Virginia State Health Department, which suggested this compromise, agrees that it is not supported by evidence or science.

Commenter: Hatcher, Will, representing Farmers

I am from Cumberland County. Biosolids is not dangerous. The increase of buffers because of odors is not the answer. An extra 200 or 300 feet will not affect the odor. If there is a better use for biosolids rather than land application, I don't know what it is. There needs to be a scientific basis for any proposed buffers.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-560 B 3 f relates to buffer zones. As discussed during the TAC process, an across-the-board increase in the buffers for occupied dwellings beyond 200 feet would impose significant hardships and difficulties for land application, particularly on smaller farms. VDH has consistently asserted that a buffer of 200 feet is more than adequate. Accordingly, there is no health or safety need to increase the buffer beyond 200 feet, and such an increase should only be done in limited circumstances. There should not be a presumption in favor of extending the buffer; any extensions should be case-by-case and based upon site-specific conditions. During the TAC process, it was agreed that the size of the buffer could be extended up to an additional 200 feet by DEQ based on documented site-specific conditions. This was not to be an automatic extension, but rather a considered decision by DEQ based on information presented by the occupant of a dwelling on adjacent property. The extension should not automatically increase the buffer to 400 feet, but rather only by the amount necessary to address the site-specific concern. Additionally, it was agreed that the buffer could be extended beyond 400 feet if the regional health director evaluates and certifies that such an extension is necessary to prevent specific and immediate injury to the health of an individual. The proposed regulation captures the essence of the agreement, but additional details are necessary about the timing and circumstances in which such an extension would take place.

The agreement reached at the TAC included the following limitations: (1) the request for the increased buffer can only come from an adjacent owner or occupant of a dwelling (not a property owner "in the vicinity" of a biosolids land application site, as described in the Guidance at p. 3); (2) the buffer area may be increased based on site-specific criteria; the amount of the increase should be limited to the minimum amount necessary to address the site-specific criteria but cannot exceed 200 feet; and (3) during the application process the request may be made in any manner; once the permit has been issued, the request must be made to DEQ and processed in accordance with VA Code § 62.1-44.19:3 (E) & (O).

Where a land applier voluntarily agrees to extend a buffer or adopt other more restrictive criteria in accordance with 9VAC25-32-560 B 3 h, there is no reason that the agreement should be provided to DEQ. The regulation itself states that these voluntary conditions do not become an enforceable part of the land application permit. Accordingly, there is no reason to include the requirement that such voluntary agreements must be reported to DEQ.

Commenter: Hazelgrove, Joe, representing Farmers

4th Generation Farmer - Century Farm in Cumberland County (Forkland Farm) - For the past 15 years have successfully recycled biosolids and never had an issue with the product or the applicator (Nutri-Blend). Have had numerous inspections on the county, state and federal level. The increase of the buffer to 400 feet would adversely impact and limit our farms productivity. With the current increase in costs, we don't need to lose any economic advantage through the use of biosolids by farmers. Let's maintain a viable biosolids program.

Commenter: Hewitt, Greg, representing Farmers

I have been farming in Frederick County since 1976. I have about 1200 acres with beef cattle and crops. We must try to have regulations based on science rather than on public perspective. The proposed buffers are excessive.

Commenter: Jones, V. Rea, representing Farmers

Farming, at best, does not provide a wide margin of profit. With the expense of commercial fertilizer, profitability is further reduced. With enough reduction in farm profit, the sale of land for other than agriculture purposes becomes more and more attractive. The loss of agriculture land and open space is much more of an environmental concern than any of the perceived issues of using biosolids.

Commenter: Kelble, Jeff, representing Shenandoah Riverkeeper

There should be expanded buffers for public access areas.

Commenter: Kondis, Dr. Edward F., representing Citizens

Property owners should be assured of their privacy and health. They should not have to be exposed to odors and airborne particulate matter from sewage sludge. Any citizen should be permitted to request and be granted a setback of at least one-quarter of a mile, 1,320 feet, between their private residence and any field upon which sewage sludge is being spread. DEQ has no real world experimental data to prove any lesser distance is safe for the health of citizens occupying their private residences.

Commenter: Martin, Popie, representing Virginia Blue Ridge Railway Trail

Had requested a greater buffer for the Virginia Blue Ridge Trail but was denied by the Board. A buffer from a public facility would need to be 1,500 feet. There needs to be a long and protected buffer for these types of outdoor public use facilities included in the regulations.

Had requested a greater buffer for the Virginia Blue Ridge Trail but was denied by the Board. There is sound science Research has been done by Dr. Susan Shipman at Duke University Medical Center on the odor from sewage sludge. She found that the odor from Sewage Sludge travels 1,540 feet. A buffer from a public facility would need to be 1,500 feet.

The other issue that was raised at the public hearing was over the use of the trail by health sensitive individuals or immune suppressed individuals. Dr. Alan Rubin, formerly at EPA, noted that there are certain people who are health impaired who should not be near sludge. There needs to be a long and protected buffer for these types of outdoor public use facilities included in the regulations.

Commenter: Martin, Steve and Popie, representing Citizens

It is important to prevent the application of sludge next to facilities that are used by the public. This rule should apply to schools, parks, trails, hospitals, etc. It is particularly important when the public use of the facility occurs out of doors. Aerosols from sludge travel over a distance of at least 535 feet and noxious odors with accompanying health effects can reach over

1600 feet. Therefore the present 400 foot buffer is insufficient protection for the users of public access facilities. A buffer on the order or 2000 feet should be considered.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

It is important to prevent the application of sludge near public facilities. This should include schools, parks, trails, hospitals, schools and the like. A buffer of 200 feet from public use facilities or properties is insufficient. This is especially important when there is outside use of a public use facility. Aerosols from sludge travel over a distance of at 535 feet according to studies done and noxious odors with accompanying health effects can travel over 1600 feet, therefore even a 400 foot buffer is insufficient for public access facilities. Recommend that a buffer of 2,000 feet should be required. This should not be a discretionary decision, it needs to be mandatory.

Commenter: McCracken, Phillip, representing Farmers

Have used biosolids since 1984. We have gotten along great with them. The proposed expanded buffers away from rocks and borders will make it almost impossible for the application of biosolids because of the small area of the fields/farms that will be available for use of biosolids.

Commenter: McEvoy, Mike, representing Western Virginia Water Authority

Would urge that an increased buffer not be mandated.

Commenter: McGuire, Brian, representing Farmers

The regulations that are in place are more than sufficient. The expansion of the buffers from 200 to 400 ft is of a concern. The value of biosolids is approximately \$350/acre. The expansion of the buffer would take several hundred acres out of being eligible for biosolids which relates to a substantial amount of money. If biosolids are excluded from these additional acres, then commercial fertilizers or alternatives, such as poultry litter will need to be utilized to manage these areas. The smell associated with poultry litter is significantly stronger than that of biosolids. Current neighbors have been very dissatisfied with the use of poultry litter in the existing smaller buffer areas. After the application of biosolids my neighbors wondered what all of the issues were about, since they couldn't smell anything. However, they were well aware of the odor of the poultry litter that I had used in the buffer areas. The quality of the soil has improved following the use of biosolids. We should give the farmers a thank you for being stance supporters of conservation. Farmers desire a thank you for the food that they put on our tables. If the regulations continue upon agriculture, the concern I have is what is going to happen to the water quality if we continue to dump as a lot of these plants do into landfills. That would be the ultimate environmental disaster. With the use of the current buffers we have lost several 100 acres from land that could receive biosolids.

Commenter: Mills, Jr., John N., representing Farmers

Why increase buffers to deprive the soil of the nutrients in biosolids when there is no scientific basis for doing so?

Commenter: Nance, Bill, representing Farmers

Has been applying biosolids to my farm for 20 years with no adverse impacts. Where you put biosolids is where it stays, it does not leave the application site. The regulation should be reasonable; use sound science and not do anything that will be harmful to farmers.

Commenter: Nelson, Bill, representing Farmers

I am a cash grain farmer and would like to echo the concerns of the previous speakers. Have used biosolids for over 20 years with great results. The recommendation to increase the buffers to 400 feet is really not an option for us. If an adjoining neighbor asks for the increase it will be granted. It does create a hardship. It does essential create two separate fields out of a single field. It will be an extreme hardship with managing the nutrients of the fields, by having to come back with commercial fertilizers. It will be difficult and expensive to try to management the plant nutrients in these increased buffer areas.

Commenter: Osl, Bill, representing Farmers

Have concerns over the regulation of a fragile industry with very thin profit margins (farming). Need to base the regulations on sound science. Do the appropriate cost benefit analysis on the regulations. Agriculture is the number one industry in Virginia. Tighter regulations will hurt agriculture. The expansion of the buffer is an issue. There is no sound basis for the increased buffers. The increase in buffers will cost farmers with no benefit to anyone. Help farmers to compete. Base regulations on sound science. Regulations that are too restrictive do not make sense. Don't play to politics. Use common sense and business friendly approaches.

Commenter: Ott, Morgan, representing Farmers

Biosolids have been used on Fauquier County for about 30 years. There have been no adverse effects. There is nothing that documents that there is a problem. The proposed buffers seem to be a "floating" buffer. The buffer is 200 feet but if a neighbor gets downwind of the application of biosolids the buffer will be 400 feet or 500 feet. It is not a standardized buffer. The proposed buffer violates the constitutional right of the land owner to use his property as he sees fit within reason. Farming and the application of biosolids for the nutritional benefit of his soil and crops to his property seems to a reasonable use. These buffers result in a farmer giving up the right to use his own property to a neighbor. There is no scientific basis for this increased buffer or the buffer around rock outcrops at 25 feet. The buffers of 100 from wells and house are reasonable. There has never been any scientific proof that biosolids is dangerous or toxic when applied as per the previous regulation. The proposed requirements for expansion of the buffers and the potash requirements should be reexamined. Maybe the old way is better.

Commenter: Poe, Ross, representing Farmers

Have used biosolids for over 20 years. Never had a complaint until last year. New neighbors moving into the area that don't know a thing about what it takes to farm just don't want it around. The use of biosolids has helped our and other farmers' bottom line. The proposed expansion of the buffers will take away about a 1/3 of the field area that I use for the application of biosolids. The expansion of the buffers will hurt everyone. The food situation is going to get serious. The buffer should not be 400 feet. Buffers should be set before spreading biosolids. Don't let the neighbors come in at the last minute to demand and get these expanded/extended buffers.

Commenter: Poe, Trish, representing Farmers

I am here to support my husband, Ross Poe and I am also representing 25 horse owners who all buy hay from my husband. He uses biosolids on 200 acres for the production of hay. The problem with these proposed buffers being extended to 400 feet is that it cuts into the land/acreage that can be used for the production of high quality hay. Farming is not an easy business. Farming is all about recycling. I am in favor of the use of biosolids.

Commenter: Powell, Mary, representing Applicators

Farmers should have access to biosolids. Do not over-regulate. Don't go beyond scientific reasoning. Increase of buffers will result in farmers losing access to a large portion of their properties. Management of acreage, some of which may only have partial application of biosolids will be difficult.

Commenter: Raine, Nancy V., representing Citizens

I will address health concerns with land application, having found general references to health in these amendments - they state that the buffer may be extended greater than 400 feet if the health department (VDH) determines it is needed to protect the health of an individual living nearby. I assume that the need for any buffer implies that given the known content of treated sewage sludge buffers are deemed advisable to protect human health and the environment.

We asked for the same set back given state roads for the right-of-way (our driveway) and use of alternate route for delivery of the treated sludge. Neither VDH nor DEQ, apparently, has the authority to do more than make a request to the spreaders for measures that would minimize impact on neighbors. DEQ did make such a request, which was not granted to it by Synagro. In our opinion, this is a case of the tail wagging the dog. If DEQ and VDH must get approval from industry to minimize impact on neighbors, especially in cases where there has been a history of negative impacts on health and quality of life, it is difficult for me to understand in what meaningful way the state agencies are regulating land application.

Commenter: Riddell, Jim, representing Farmers

Have used biosolids for over 25 years. Biosolids is the most regulated and prescriptive material used on the farm today. To my knowledge and based on the available documentation there have been no documented cases of ill health associated with the land application of biosolids. The draft regulations if passed will reduce the amount of land and biosolids that can be used on the farm. Farmers are avid stewards of the land and the water. The expansion of the buffers from 200 ft to 400 feet will be extreme and will restrict the beneficial practice of land applying biosolids. What is the basis and what is the data that supports this proposed increase? Where is the science based information supporting these proposed amendments? Additional restrictions will limit the use of this beneficial practice. If you will remove these extreme restrictions we will be able to continue to use biosolids in Virginia.

Commenter: Ritchie, Jason, representing Farmers

We have been farming in Fauquier County for 5 generations. We have used biosolids for over 20 years. These proposed extensions of the buffers would wipe out a lot of the beneficial

land that we could use biosolids on considering the size of our fields. The buffers around rock outcroppings would also take out a lot of usable land.

Commenter: Rosson, Charles A., representing Farmers

Have used biosolids for over 30 years. I have seen no effect on the family or cattle or neighbors. Concerned about the extension of buffers which will cut down on the field size especially with smaller fields. Another problem with the increase in buffers is the increased areas where commercial fertilizers would have to be used. Commercial fertilizers just can't match the soil nutrient improvement abilities of biosolids.

Commenter: Sharpe, Charles, representing Farmers

I live in Louisa County. My family has been raised hay and cattle for a number of years. We rent a lot of our land and if we make the buffer area larger then what it is it will make it difficult to farm and afford the fertilizers that will be needed for the increased buffer areas. There is a cost factor that needs to be considered. There is no runoff from biosolids. You can see a different line in the grass between where biosolids has been applied and where it is not applied. There is a marked difference in the quality of the crop and the fertility of the soil in the two distinct areas.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

Section 9VAC25-32-560 B 3 f relates to buffer zones. As discussed during the TAC process, an across-the-board increase in the buffers for occupied dwellings beyond 200 feet would impose significant hardships and difficulties for land application, particularly on smaller farms. VDH has consistently asserted that a buffer of 200 feet is more than adequate. Additionally, there is no other science or research that provides any support for extending this buffer any further. The regulations propose to allow an increase in buffer requirements based on site specific features, and that any such buffer increase shall be incorporated into the permit at the time it is issued. The Board was asked during its recent public hearings to base its decision on science and decades of experience that demonstrate the safety of biosolids and their benefits to the environment. The VBC proposes to amend the proposed language by eliminating the following "...When necessary, buffer zone setback distances from odor sensitive receptors may be extended to 400 feet or more and no biosolids shall be applied within such extended buffer zones. In accordance with 9VAC25-32-100 and 9VAC25-32-490, the board may impose standards and requirements that are more stringent when required to protect human health and the environment, or prevent nuisance conditions from developing, either prior to or during biosolids use operations." Additionally, the subsection for monitoring and testing should be eliminated as well.

Commenter: Somerville, Walker, representing Farmers

I am a 6th generation farmer in Culpeper County. I have the 7th and 8th generation already getting involved on the farm as well, our grandchildren. We have a beef cattle operation on the Rapidan River. We have used biosolids without any adverse affects. Biosolids has been a great benefit to our family farming operation. The regulations are sufficient now. We are concerned with the buffers being proposed. We would like to see minimum amount of buffers.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

DEQ has made clear that it will not identify individuals who may be entitled to extended buffer protection. Instead, it will leave it up to the VDH to identify such individuals only from a pool of individuals who contact it with a request for additional buffers. Since this proposed policy and practice does not ensure protection to all those who need the extended buffer, the extended buffer right must be extended to everyone in the vicinity of each land application site. Thus, in order to comply with the Code, the regulations must provide: "Unless DEQ has identified all individuals who may be entitled to extended buffer protection, extended buffers must be extended to everyone in the vicinity of each land application site sufficient to ensure that they will not be exposed to sewage sludge constituents."

DEQ should also reconsider its guidance language with respect to reduction or elimination of buffers with written consent from the affected landowner as well as the resident if they do not own the dwelling. It is submitted that no one has the right to waive health protection for children that reside on a property adjacent to a biosolids land application site. It is further submitted that no owner of a property adjacent to a biosolids land application site should have the right to waive health protections for anyone not fully appraised of the risks or who are not in an economic position to waive the health protections set forth in the regulations.

If DEQ ensures identification of everyone entitled to an extended buffer, the regulations would have to ensure that the buffer applied is sufficient to ensure that health is protected. The draft regulations make no provisions for ensuring that extended buffers will be sufficient to ensure that health is protected. This, in order to comply with the Code, the regulations must provide: "If adequate extended buffers are not sufficient to ensure that health is protected, no land applications shall be made on the sites involved."

Provide buffer guidelines sufficient to ensure that health is protected. Failure to make clear that without extended buffers needed to ensure that health is protected, no land application of sewage sludge is allowed. The DEQ Draft Guidance on Biosolids Buffers memo sets forth a number of situations where the Code allows DEQ to extend buffers when needed to ensure that Health is protected. However, the memo fails to make clear that if DEQ fails, for any reason, to extend buffers needed to ensure that health is protected, no lawful land applications can be made. This is the case even if a permit has been issued. In light of DEQ's practice of ignoring this Code prohibition, the Buffer Guidelines are fatally defective.

The Guidance memo gives the false impression that it is VDH's primary responsibility to ensure that health is protected when sewage sludge is land-applied in Virginia. That is simply not the case. That responsibility was clearly transferred to DEQ under the Code. The Memo is based on the false assumption that VDH has scientific support for the adequacy of the proposed buffers, including 400 foot buffers, set forth in the Guidance Memo. The Memo also requires that individuals who need extended buffers request them, without ensuring that all such individuals will be clearly informed of that right. Until that is done, DEQ cannot ensure that health is protected. Under the Code, the responsibility falls on DEQ, not on unsuspecting victims who may not even be aware of the risks. Also, noticeably absent is any reference to adequate buffers to address nuisances if any unincorporated land applications are authorized by regulation and by permit.

The Guidance memo states that VDH holds primary responsibility for health related issues in the Commonwealth, without adding that DEQ holds primary responsibility to ensure that health and the environment are protected when sewage sludge is land-applied in the Commonwealth. The Memo then adds that VDH asserts that regulatory buffers of 100 feet from property lines and 200 feet from occupied dwellings provide adequate protection to the majority of the public. However, VDH did not make such a statement and provided no documentation. Instead, VDH only made that recommendation, with no assertion or documentation that those buffers would ensure that health was protected. Without documentation that such buffers would ensure that health was protected, the Buffer Guidelines are fatally defective.

The Memo indicates that DEQ would implement the extended buffer when requested. DEQ did not put in place a clear directive that the Permit Holder must ensure that all those who may be entitled to these extended buffers (200 from property lines and 400 feet from occupied dwellings) are made aware of this opportunity. Since it did not, based on the draft regulations, no land applications would be allowed under the Code. Without documentation that the extended buffers is sufficient, and with assurance that everyone is aware of the right to secure extended buffers, DEQ cannot ensure that health is protected.

Under the Code of Virginia, if extended buffers are not sufficient to ensure that Health Sensitive Individuals are not exposed, no lawful land applications are possible under issued Permits. Although VDH recommended that the regulations establish 400 ft buffers from occupied dwellings and 200 ft from property lines because of the risks to health sensitive individuals, DEQ declined to do so, leaving those 200 ft buffers from occupied dwellings and 50 ft buffers from property lines. The draft regulations recognize DEQ's authority to impose extended buffers when needed to ensure that health is protected. However, the draft regulations also make clear that this is a may, not shall obligation. This permissive language is consistent with the Code, in that the Board is authorized, not obligated to impose sufficient buffers that ensure that health sensitive individuals are not exposed to sewage sludge. However, the draft regulations do not make clear that when DEQ fails to impose adequate buffers to ensure that such individuals are not exposed, the Code prohibits all land application in the vicinity of such individuals. This must be addressed by inclusion of the following language: "When buffers are not extended by DEQ as needed to ensure that Health Sensitive Individuals will not be exposed to constituents in sewage sludge, no land applications are allowed in the vicinity of health sensitive individuals."

VDH recommended that DEQ establish 400 ft buffers from occupied dwellings and 200 ft between all property lines at which the public may have access and any part of the application site in 2008. However, DEQ failed to include even these inadequate VDH recommendations in the draft regulations. VDH also confirmed that it could not document that a 400 ft buffer would be sufficient to ensure that health sensitive individuals would not be exposed. The draft regulations address this uncertainty as follows: "Buffer may exceed 400 feet where an evaluation by the Virginia Department of Health determines that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual." Unfortunately the draft regulations require that VDH meet a criteria totally unrelated to DEQ's obligation to ensure that health is protected. If the Code requirement is to be met, the following language must be included by the Board in its amended regulations, the regulations must

provide: "If DEQ fails to document that buffers extensions have been put in place to ensure that health is protected, no land applications can be made on any site at which such extended buffers are needed."

With respect to extended buffers from occupied dwellings, DEQ has made clear that it will rely on VDH to establish those buffers. However, this requires that VDH document that any extended buffer it recommends will be sufficient to ensure that health is protected. Thus in order to comply with the Code, the regulations must provide: "Any extended buffer recommended by VDH shall be the minimum buffer for land application unless VDH documents that the recommended buffer will protect health. DEQ must independently verify if additional extended buffers are needed to ensure that health is protected. No land applications shall be made on sites where DEQ has not documented that a sufficient buffer is in place to ensure that health is protected." It remains unclear to what extent DEQ will actually determine whether any extended buffer will actually ensure that health is protected. Thus, in order to comply with the Code, the regulations must also provide: "Where an evaluation by a medical professional determines that a specific buffer is needed to ensure that the health of a person in the vicinity of a land application site is protected, that buffer shall be the minimum buffer unless DEQ is able to document that a lesser buffer would be adequate to ensure that the health of such individual is protected."

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed buffer language does not adequately reflect the TAC's general consensus on an approach that would allow for automatic extensions of buffers from 200 feet up to 400 feet upon request.

Commenter: Stevick, Stephen M., representing Citizens

Contrary to USEPA regulations, the proposed setbacks do not appear to be risk based, but arbitrary. Absent clear standards for setback requirements, specifically the assumptions regarding the need for setbacks (e.g., contents of sludge, clearly stated public health and environmental considerations requiring setbacks, the basis for setback computations and the specific applicable setback computation) the setback requirements are arbitrary, inconsistent, and lacking of scientific integrity.

Each right-of-way (ROW) presents a unique circumstance. Unique circumstances require unique standards. For example, setbacks for private driveways and ROWs should take into consideration the unique and often increased exposure to which the user is subjected. That exposure may be significantly different from that experienced on public roads for the following reasons: a. ROWs vary in length: The longer the ROW the greater the exposure; b. ROWs often represent the sole access to one's home or property, thereby subjecting residents, relatives, friends, agents, etc., to repeated, extended exposure and denying user(s) the option of alternatives often afforded users of public roads; c. Sludge may be spread on both sides of the ROW, thereby enveloping the user in a higher risk environment; d. ROW maintenance, gate openings, mail, newspaper delivery, etc. require extended on site presence; and e. ROWs dependent users with health issues or those who are particularly sensitive to the airborne pollutants of sludge or whose medical condition presents greater risk are more subject to the

adverse effects of exposure to sludge. Allowing sludge along a private ROW ("along" meaning within the maximum setback allowed under the regulations) should be prohibited, unless holders of the right of way specifically and formally approve of the proposed use.

Commenter: Stratton, Tom, representing Farmers

I have had chronic bronchitis. Different things will attack different people. I visited to a number of farms that applied biosolids, before I applied it on my farm. Increase in setbacks or buffers will have a drastic effect on smaller farms. It would eliminate them from being able to use biosolids.

Commenter: Strother, Charles E., representing Buffers

Concerned that this regulation is very draconian by the extension of the buffers. Our farm borders Sky Meadows State Park. We have a huge amount of woods on our back pasture that is in Sky Meadows State Park. If we have to go to back 400 feet all the way around, approximately 60% of the field we will lose the benefits of putting the biosolids on. The other end of the field is too steep to put biosolids on. We also have a lot of rock outcrops (knolls). The current distances from those are fine. There is no sense to make an "Ivory Tower" solution to extend the buffers around those. I am very much against doing that.

Commenter: Taylor, Claiborne, representing Agri-Services

I have worked with biosolids for over 20 years. First DEQ managed the program and then it got shifted to VDH and now it is going back to DEQ. When DEQ first had the program they originally had buffers that were based on science that were doubled to be extra safe. Those buffers were the same as those in the current regulation. Now it looks like the proposed buffers are going to be double that again so that we will be 4x as safe. This increase is unnecessary. I agree with all the comments made by the previous speakers.

Commenter: Terrell, Miles S., representing Farmers

I live in Caroline County. I have used biosolids for over 30 years. Have had good results, just can't get enough biosolids to use. Don't let the buffer be any larger than it is today.

Commenter: Tignor, Jr. Allen, representing Farmers

Have used biosolids for years with great results. One of the issues that I am concerned with is the increase in buffers which has been raised by previous speakers. I work a lot of small fields, if they are extended too much it eliminates larger areas of the farm where I cannot use biosolids.

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems recognizes the benefit to the Department of having fixed buffers for which they can reference and utilize. However, we believe it was the intent of the TASC for an additional buffer up to 200 foot not a default of 200 foot and a buffer greater than 200 foot would require documentation of a need to be evaluated by the Department of Health. We understood the Department would take into consideration site specific criteria when implementing the additional buffer. Recyc Systems is opposed to implementation of additional buffers by the Department without prior notice to the permit holder. Consideration must be given by the Department to active field operations. We also note that State Code provides for a

14-day notice to the permit holder by the Department.

We have heard much discussion and comment regarding setbacks from adjoining property lines and residences. It is our opinion that no agreement will be reached nor should it be determined by a polling of stakeholders with the majority winning. Rather the recommendations of experts such as those who served on the Expert Panel and the Technical Advisory Committee must be followed. We note that the Department of Health has consistently supported the 200 foot buffer from residences as protecting health.

Commenter: Turpin, Richard B., representing Citizens

Set backs from property lines, roads, drainage, etc. must be 400 feet.

Commenter: Wagner, Steve, representing Farmers

Excessive regulations such as extended buffers on roads, houses, rivers, etc., are cumbersome already and in need of review. They make applications on small farms (40 acres or less) impossible to apply.

Commenter: Wilkenson, Ricky, representing Farmers

5th Generation Farmer - Extending the buffers as proposed will only hurt the farmer.

Commenter: Willingham, Alton, representing Farmers

Have been using biosolids since it was available in Fauquier County, for 25-30 years. There has been so much work that shows that biosolids is harmless, there doesn't seem to be much reason to talk about it further. There are only 3 ways to dispose of biosolids: put it in the streams, burn it or put it on agricultural land that has been shown totally safe. The use of biosolids has meant a lot to me. I chose to farm. I am 88 years old and hope to stay on the farm for the rest of my life.

The buffers on my farm include a 200 foot buffer along a road which results in a wide space that has different growth of vegetation and serves no purpose. The buffer/setback from my neighbors, a housing development, is also 200 feet. I have asked the neighbors (the Secretary of the Housing development) for a waiver of 100 feet of that buffer. The housing development is set back off of the property line, approximately 1/2 mile. I am dependent on a neighbor to make a decision on what I can do with my land. The buffer should be considered conditional on the soil and the location of houses. I would have to discontinue farming if I had to discontinue the use of biosolids and have to rely on commercial fertilizer. Only complaint I have hear about with the use of biosolids is odor. That is no reason to restrict it. There is no evidence that odor is harmful.

Commenter: Winn, William and Barbara, representing Citizens

Proposed changes of a protective border (buffer area) of application on fields should have provision for 1) intervention by chemically sensitive individuals and 2) implementation by a responsible person involved as well as a public record of such. We further wish the buffer zone be at least 400 ft. wide and include a provision for authority/recording, etc. to increase if needed for special cases.

DEQ Response to Comments: Buffers and Setbacks, Health and Odor Related Setback Extensions

The topic most discussed by commenters was the buffer, or setback distance, from homes and property lines. In the proposed regulation, DEQ incorporated existing guidance established for setbacks from homes and property lines into the regulation. This guidance, developed in concert with VDH, establishes a procedure whereby the standard setback distance from an adjoining occupied dwelling home is 200 feet and 100 feet from a property line. An adjoining resident or landowner can request that the setbacks be doubled in distance to 400 feet from an occupied dwelling and 200 feet from a property line. This extension would be granted “upon request” by the owner or occupant, without a requirement to verify existence of any medical condition.

Comments were split between those asserting the setback distances should not be extended, and those that felt the setback distances should be significantly increased.

The primary focus of comments regarding residence and property line setbacks received from farmers, land appliers and wastewater treatment facilities stated that: 1) the length of the setbacks were not scientifically based; 2) the extended setback distance was only established for administrative convenience; 3) the setback procedure did not conform with the consensus of the TAC; 4) the additional setback request should be evaluated on the basis of the purpose of the request instead of being granted upon request; 5) the ability to request a setback extension on the same day as land application potentially presents a significant operational problem to land appliers and farmers; 6) the additional cost of fertilizing the area in the setback is potentially a hardship to farmers and could limit farm productivity; and 7) the increased distance could eliminate some smaller farms from being able to receive biosolids.

The primary focus of comments from citizens concerned about the use of biosolids stated that: 1) the length of the setbacks are not scientifically based; 2) there is no evidence the setback distances are protective of health, resulting in potentially not satisfying a statutory mandate; and 3) some selective studies have indicated odor from biosolids can travel approximately 1500 feet; thus, setbacks should be larger.

While the setback language in the regulation has been clarified, DEQ does not propose significant changes to the residence or property line setback distances. This is due to the fact that the distances and justification for extension to protect public health is based upon guidance from physicians at VDH with experience in evaluating biosolids setback extension requests.

The distances proposed by VDH are based upon the science related to transmission of pathogens, with the addition of a safety factor intended to provide an abundance of caution for those persons whose immune systems have been compromised by illness or other medical conditions.

In its 2008 Report to the Governor and the General Assembly (House Document No. 27), the Governor's Expert Panel on Biosolids stated the following:

In early discussions, the Panel agreed that addressing the questions surrounding citizen-reported health symptoms should be its highest priority. In the past 18 months, the Panel uncovered no evidence or literature verifying a causal link between biosolids and illness, recognizing current gaps in the science and knowledge surrounding this issue. These gaps could be reduced through highly controlled epidemiological studies relating to health effects of land applied biosolids, and additional efforts to reduce the limitations in quantifying all the chemical and biological constituents in biosolids. While the current scientific evidence does not establish a specific chemical or biological agent cause-effect link between citizen health complaints and the land application of biosolids, the Panel does recognize that some individuals residing in close proximity to biosolids land application sites have reported varied adverse health impacts.

Regarding odor and health impacts:

The Panel recognizes that odors from biosolids could potentially impact human health, well being and property values, but could not confirm such an impact or the extent of such an impact based on the current body of scientific literature and information presented directly to this Panel.

In response to its findings related to this question, the Panel recommends:

- a. The TAC should examine the DEQ regulations pertaining to odor, including considering that municipal biosolids generators be required to have odor control plans.

Additional information pertaining to the expert panel and the final report can be accessed at <http://www.deq.virginia.gov/info/biosolidspanel.html>. The panel determined that "as long as biosolids are applied in conformance with all state and federal law and regulations, there is no scientific evidence of any toxic effect to soil organisms, plants grown in treated soils, or to humans (via acute effects or bio-accumulation pathways) from inorganic trace elements (including heavy metals) found at the current concentrations in biosolids."

Historically, VDH responded to reports of adverse health impacts by doubling the setback distances from residences or property lines. VDH did this in conformance with state law and regulations in place at the time. DEQ's proposal to continue the practice of doubling the setback distances, albeit in a different administrative fashion, represents conformity with previous VDH practice and a regulatory precedent that was demonstrated by VDH to be protective of human health and thus statutory requirements. Additionally, DEQ has proposed that odor control plans be required when biosolids are land applied in order to reduce the potential for odor to impact human health.

With respect to the administrative procedure proposed to grant setback extensions upon request, DEQ proposed this procedure based on TAC discussions. When the VDH representative on the TAC suggested all residence and publicly accessible property line buffers be extended based on the difficulty in ensuring all persons with certain medical conditions were identified, the TAC discussed options to address the time lag necessary to evaluate a newly identified health complaint. The concept of granting a standard buffer extension “upon request” rather than a time consuming and unpredictable evaluation process that potentially affects land application operations was generally agreed upon as a reasonable compromise.

With respect to a buffer extension request received after biosolids has been delivered to the field, DEQ responded to a recommendation from the reconvened TAC and included a limitation on the buffer extension request specifying that any such request must occur to DEQ at least 48 hours prior to the commencement of land application. The request must then be communicated to the permittee at least 24 hours prior to land application, unless a request to extend the buffer is received from VDH. DEQ will add this requirement as a permit special condition that establishes this procedure at the time of permit issuance.

To address concerns voiced regarding setbacks from schools, hospitals and other such facilities DEQ added a minimum setback requirement from these “odor sensitive receptors” (defined in the regulation) to be a minimum of 400 feet. The setback from publicly accessible property lines is proposed to be 200 feet. These setbacks are also based on guidance from VDH.

Concerns were expressed about the cost of fertilizing farmland, the inability to fertilize setback areas and the need to substitute alternative fertilizers for these areas. Although there is a benefit to the use of currently “free” fertilizer, the inability to use biosolids in setback areas is potentially offset by the reduced cost of fertilizer in the areas that do receive biosolids as well as the administration of a standard and predictable setback extension procedure. In addition, some commenters expressed concern that some small fields may be ineligible for biosolids application due to setback distances. It is likely that some areas and farm configurations are not optimally situated to take full advantage of fertilization with biosolids.

SWCB Amendments - September 22, 2011 Board Meeting: Buffers and Setbacks, Health and Odor Related Setback Extensions

During the State Water Control Board meeting, after hearing the department staff presentation and public comment, some Board members expressed concern that the language regarding extending setbacks upon request was not adequately reflective of the purpose of the extension and requested that the language be changed to require a doctor’s note stating the extension is requested for medical reasons.

Staff presented three alternatives: 1. the original language offering setback extensions upon

request; 2. new language offering extended setbacks upon their request based on an existing medical condition and protection of their health; 3. new language offering extended setbacks upon request from their physician based on medical reasons, and further specifying that a note from the patient's physician must be submitted to DEQ.

The Board voted 5 to 1 in favor of the 3rd option, requiring a request from the citizen's doctor in writing on a form provided by DEQ.

Subject: [DEQ's Handling of Complaints](#)

Commenter: Davis, Donald, representing Citizens

My water supply is from a well in my yard that is 510' deep and the water in it is only 20' below the surface. Last month my neighbor, a dairy farmer, spread biosolids only 100' from my house and 120' from my well. Have those poisons gone into my water supply? Is it safe to drink the water now? If my neighbor spreads biosolids again, in violation of the 200' regulation, who can I call to report the violation?

Commenter: Foster, Ed, representing Citizens

There needs to be a contact person 24/7 and not an answering machine. When sludge is delivered at 3 in the morning and something goes wrong, what good is an answering machine?

DEQ Response to Comments: [DEQ's Handling of Complaints](#)

Citizens who wish to report an alleged violation or register a complaint should contact their local DEQ regional office. Regional contact information can be obtained by calling (804) 698-4000 or 1-800-592-5482, or referring to the DEQ website at www.deq.virginia.gov/regions.

§ [62.1-44.19:3.C.9](#) of the Code of Virginia prescribes that DEQ regulations include procedures for the prompt investigation and disposition of complaints concerning land application of biosolids, including the requirements that (i) holders of permits issued shall report all complaints received by them to DEQ and to the local governing body of the jurisdiction in which the complaint originates, and (ii) localities receiving complaints concerning land application of biosolids shall notify the DEQ and the permit holder. The statute also requires that DEQ maintain a searchable electronic database of complaints received during the current and preceding calendar year, which shall include information detailing each complaint and how it was resolved.

DEQ procedures for handling complaints regarding land application of biosolids are as follows: All complaints received by DEQ are promptly investigated by regional biosolids inspectors. Most complaints require a site visit to collect information. Inspectors assign each complaint a unique identifying number and enter it into a searchable electronic database maintained by DEQ. This database was initiated in 2008 when the Biosolids program moved to DEQ from VDH. If the complaint occurs after hours, the Pollution Response Program (PREP), which is in place for emergencies and after-hours calls, handles the situation and refers the complaint to

biosolids inspectors as required.

Other information entered into the database by inspectors includes: Inspector's Name, Incident Response (IR) number, Date, County, Type of Complaint (Biosolids, Industrial Waste, Poultry or Manure), Permit Number, Site, Location, County contacted, Responsible Party Contacted, Others Present, Responsible Party Name, Reasons for Complaint and Inspection (such as truck traffic, tracking out, buffers, health, odor, signage, runoff, signage), Observations/Comments, Corrective Actions Needed, VA Dept. of Health Regional Director Contacted, VDH Recommendations, Case Status, and Field Inspector ID.

The categories of required information entered into the data base indicate what information the inspectors must collect during their investigations from the complainant, from the site and from all the parties involved. DEQ receives complaints via phone, email and personal contact. Health complaints are referred to VDH for follow up as needed. The data base provides information to guide program decisions and constant review of the complaints allows staff to take proactive steps to resolve issues.

Subject: [Emerging Contaminants in Biosolids](#)

Commenter: Clabough, Jeanne W., Ph.D, representing Citizens

I have followed closely the controversy over the use of sewage sludge as a fertilizer on Virginia's farmlands. While this process is a good way to recycle human wastes, there is not enough research data available currently as to the safety or potential harm of certain pathogens, heavy metals, pesticides and other elements that can remain unchanged in "treated" biosolids. For example, prions (the non-living molecules that cause mad cow, scrapie, chronic wasting and Creutzfeldt-Jakob diseases) are markedly resistant to inactivation by heat, ultraviolet light, x-rays, and even formalin and can lie dormant in soil for years until a suitable host ingest or inhales them passing them on to species that then consume it. Human waste is a cost-effective (and profitable) fertilizer and a convenient way to dispose of sewage, but until a lot more is known, a moratorium should be place on spreading it. The spreading of biosolids should not even be debated. It should be the subject of intensive research into contents, effectiveness of treatments, and long-term consequences. Some such research has already been published in reputable scientific journals and is available to the public and to those responsible for public and environmental safety and quality.

Commenter: Davis, Brandon P., representing Shenandoah County

Adequacy of review of scientific literature: A recent peer-reviewed academic article questions the entire EPA regime which has determined that biosolids are safe for human health and the environment and upon which the Commonwealth has relied for the scientific validity of its biosolids program. The abstract for this article includes: "...Section 40 of the Code of Federal Regulations Part 503 regulates the land application of sewage sludge based on pathogen content...A critical inspection of the pertinent literature, however, reveals that the standards are based on outdated methods, outdated data, inaccurate data, and flawed assumptions, leading to

underestimation of risks. The standards are not sufficiently protective...the practice of land application of sewage sludge must be discontinued...Another significant problem with Part 503...is that thousands of new chemicals have been produced, used, and released since 1990, and there are new pathogens of concern that have not been considered since the initial standards went into place...(citation: "A Critical Review of the U.S. EPA's Risk Assessment for The Land Application of Sewage Sludge," Jennifer M.J. Mathney, *New Solutions*, Vol. 21(1) 43-56, 2011). Before making final changes to the regulations under revision, DEQ and the SWCB should establish a transparent process whereby the public's confidence in the review and use of pertinent scientific literature is obtained and maintained.

Commenter: Fowler, Jason, representing Self

The study also laid the steps toward further action and the needed conclusion (in my opinion) - which is to end our willful ignorance--to end our denial that sludge is an active collection of toxins. (Reference: EPA Study: Biosolids: Targeted National Sewage Sludge Survey Report - EPA-822-R-08-014). It is time for the state of Virginia to begin awaking from the fantasy that biosolids is both consistent in its chemical composition and entirely safe for the people and the land. We cannot continue ignoring the highly potential hazard that biosolids poses to our communities. It is irresponsible and for some who know better -- I believe it is criminal. The future of our great commonwealth rides on the ability for its leaders to respond to its people. Will you not magnify the voice of the people as we demand for an end to the blind eye and the blank check that has been handed to the municipal sewage management industry? May the Powers that Be in Virginia government and business fall under the grace of GOD in this matter. (Additional scientific studies cited: http://sourcewatch.org/index.php?title=Scientific_Studies_of_Sewage_Sludge; as well as this news report" Anna Werner Investigates: Organic Compost or Toxic Sludge? where Hugh Kaufman, an EPA senior policy analyst also questions the safety of biosolids.

Commenter: Gibson, Dave, representing Citizens

Since the last peer review of USEPA's work on sludge more than 30 years ago, plants have consistently proven to be outstanding factories for antibiotic-resistance and vibrant laboratories for culturing gastroenterological creations which tend to lower immunological response. In the absence of contrary and conclusive evidence that municipal sewage sludge can be safely applied - both chemically and biologically - Virginia's proposed changes expose the public to unreasonable risks.

The proposed amendments would further promulgate management standards for sewage sludge applications which have not been tested or reported to the public. A 2002 National Research Council panel and publication ("Biosolids Applied to Land: Advancing Standards and Practices", 2002) found that "epidemiological studies have not been conducted on exposed populations, such as biosolids applicators, farmers who use biosolids on their fields, and communities near land-application sites" and that "USEPA does not have an adequate program to ensure compliance with the biosolids regulations and has not documented the effectiveness of its prescribed management practices."

Commenter: Henderson, Jim, representing Citizens

The risks incurred in using sludge on agricultural land are subtle and hard to quantify,

however experience, research, and common sense show us they are real. These regulations do not require or ensure that the responsible agencies perform "due diligence" in determining the causes of the reported bad results nor that they will adequately evaluate the overall risk to the food chain, the general population, and the environment as required by VA Code.

Commenter: Kirkpatrick, Marcia, representing Madison County Residents

I would hope more could be done to educate the public about the contents of this material, basically urban waste. Everyone needs to know that it is just not processed human excrement (questionable enough), but also every type of household waste, from Drano to rat poison, to say nothing of waste generated by businesses and the numerous industries whose waste disposal is not regulated. Once the deed is done, it isn't reversible, except hopefully, by time. The effects, of course, are not confined to the fields where sludge is spread, but move, through runoff, into streams, affecting wildlife -- some of which is consumed by humans -- and via the streams to the land of many others down the watershed.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ makes no reference in the proposed regulations to the latest EPA scientific information noting the 120 toxins in sewage sludge from the 2009 TNSSS, even though members of the SWCB voiced concerns. The Internet contains thousands of reports by scientists and health professionals throughout the world voicing concerns about the detrimental effect on human and animal health from toxins found in sewage sludge. DEQ has ignored all this scientific information. DEQ is supposed to protect human health, yet DEQ has no scientific risk assessment study showing that public health is protected. To protect public health, DEQ must determine safe limits for ALL of the toxins identified in sewage sludge. DEQ has never determined these safe limits.

DEQ needs to obtain a legal opinion from the Virginia Attorney General to determine whether spreading sewage sludge containing the specific steroids, pharmaceuticals and hormones, as well as marijuana, cocaine, LSD, and other drugs dumped into city sewers and found in sewage sludge, is a violation of the U.S. Controlled Substances Act.

Commenter: Layton, Katharine, representing Self

Thank you for the notice, but it occurred to me after reading through the attached pages of redundant, misleading, and too often nonsensical summaries that the basic safety issues that have been brought to the attention of all concerned have yet to be properly addressed. I am having great difficulty understanding the purpose of the public comment period if serious comments and concerns are only falling on deaf ears. Is this for real or just a done deal procedure? Once faith in the system is lost, it will be difficult if not impossible to restore. I do not think that this will just go over everyone's heads.

Commenter: Lorien, Joy, representing Citizens

Myth: "Sludge is a fertilizer" - Fact: According to the Federal Clean Water Act, sewage sludge is a pollutant. Myth: "Sludge only contains what's flushed down household drains or toilets." - Fact: Sludge contains industrial hazardous chemical compounds, toxic metals, surfactants, pharmaceuticals, carcinogens, and disease causing pathogens. Every month every business and industry in the country is allowed to discharge 33 pounds of hazardous waste into

sewage treatment plants. Most of these contaminants concentrate in the resultant sewage sludge.

Sludge contains regulated amounts of 10 heavy metals, salmonella and fecal coliform. What else might you find in sewage sludge? - Alkylphenols and alkylphenol ethoxyates, dioxins and furans, flame retardants, heavy metals (including some that are not regulated), hormones, steroids, and more.... The question is what are you putting in your mouth when you eat food grown in sludge? The answers to the sludge problem are upstream ones. We shouldn't make such toxic substances if we don't have a way to dispose of them. So, sure, it's a problem to figure out where to put all of the sewage sludge. But lying that it's safe and then selling to unsuspecting gardeners ain't the answer.

Myth: Sludge is safe because it is tested." - FACT: Only a fraction of the tens of thousands of man-made chemicals in this complex mixture is tested and regulated. Regulating and monitoring individual components, while ignoring the toxicity of breakdown products and interactions, does not assure safety. A 2002 National Academy of Science (NAS) panel warned that the risks of this unpredictable contaminated waste cannot be reliably assessed.

Commenter: McClain, Rodney, representing Shenandoah County Department of Public Utilities

We have land applied biosolids in Shenandoah County in the past. We now find it less expensive to take the materials to the landfill for disposal. Being conservative, We have to do that for our customers. I do not feel that this is the final and best resolution for biosolids or treated sewage sludge. I support the work that DEQ has done in pulling together this evaluation of the regulation. Concerns have been raised in Shenandoah County regarding the import of biosolids into the county. This concern is primarily because of the unknown composition of the biosolids. I believe that land application of biosolids can be done safely. I would hope that we are not going down the road to shut the door on land application of biosolids.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Given the largely unknown chemical composition of sewage sludge and the resultant lack of information regarding the fate, transport and effects of these materials, much more stringent regulations are required to ensure the protection of human health and the environment. Sewage treatment plants are not designed to remove many of the chemicals that are currently entering the waste stream - they also end up in the sludge. To ensure the protection of surface and ground water resources, the regulations should require a more complete chemical characterization of sewage sludge. All biosolids permitted for land application should first be monitored for an expanded list of pollutants that are known to occur in sewage sludge. At a minimum, 9VAC25-32-356 should be revised to require biosolids be analyzed for aluminum, barium, beryllium, boron, calcium, manganese and silver (identified by EPA as metals of concerns in sewage sludge). Given the weight of circumstantial evidence indicating the prudence of including additional chemical analyses and the total lack of scientific evidence to support the safety of these materials, a more conservative regulatory approach is warranted. It is time for the burden of proof to be shifted to require that biosolids be proven to be safe prior to being land applied throughout the Commonwealth.

I would echo the comments made by Ms. Hughes, Mr. Atwood, and Ms. Gessner. The revised regulations do not address or alleviate our concerns which remain (1) the largely unknown content of the sludge, (2) application of sludge to geologically and ecologically vulnerable sites, and (3) insufficient requirements in the regulations to protect the environment or human health. We object to the revised regulations because they do not address the failure of the existing regulations to protect the environment both for humans and wildlife. Therefore, we look forward to DEQ publishing revised regulations that protect the environment from land application of sewage sludge.

Commenter: Pence-Lanstot, Amy, representing Madison County Residents

There is not scientific information to deem the land application of biosolids as "safe". Has this procedure been exhaustively and repeatedly tested until there is proof that this will not contaminate the food chain or rivers, streams and creeks that flow into rivers and the bay downstream? I don't believe the chemicals used to treat it can neutralize all the things that are in biosolids. I believe this procedure needs more scientific research before it is released into our environment.

Commenter: Ritchie, Bruce, representing Citizens

I am concerned that "biosolids" are being applied to farmland that is in the human food chain. It appears to me that there are inadequate studies, and ample opportunity for complex chemicals from household cleaners, to industrial wastes, and any number of chemicals/compounds that are not normally in a healthy/natural food chain, to be present. Other concerns include hormones, antibiotics, medicinals, chlorines, heavy metals, and oil/hydrocarbons. There is also the combining of these compounds while they are comingled in our sewage system. It matters little of the crop grown is for animal consumption, if we then eat those animals. I have not heard of any studies locally that have even begun to address the complexity of the chemical issues surrounding sewage sludge, and its addition into living soil/plant systems. We must be guided in our public policy by the precautionary principle...it would be irresponsible to continue to use sewage sludge (biosolids) within the living environment, unless we can account for the overall safety, and the lack of these many dangerous components in our fields/crops. First, do NO HARM! Thank you for doing what is required to ensure the health and safety of our citizens and our environment/food chain.

Commenter: Van Drie, Gerhardt, representing Sludge Watch

Crops absorb pharmaceuticals from sewage sludge spread on farmlands. Agricultural crops can absorb pharmaceuticals found in the water used to irrigate them or the sewage sludge used to fertilize them...When humans consume pharmaceuticals, active traces of those drugs are excreted in their feces and urine. Modern treatment methods for water and sewage do nothing to remove these biologically active chemicals...

DEQ Response to Comments: Emerging Contaminants in Biosolids

The vector attraction and pathogen reduction sampling and testing regulations are consistent with current EPA 503 biosolids treatment requirements. The metals content and nutrients in biosolids are tested monthly both by the generators and the VPA permit holder for the larger

generators. Smaller sized generators are required to test at a reduced frequency. There also are non hazardous waste declarations submitted by the generators for their produced biosolids. All of these biosolids treatment practices are designed to be protective of human health and the environment. While research is an ongoing process, these practices are protective due to their conservative design. Research into “emerging pollutants” is an ongoing process in all permitting programs at DEQ and new criteria are adopted when deemed necessary through the Triennial review process and subsequently incorporated into permits.

DEQ retained the regulatory provision that additional sampling and analysis may be required for site-specific or unusual circumstances, but did not add any additional analysis requirements. The regulation maintains broad site-specific authority to request additional information in cases where additional scrutiny is warranted. If evidence that elevated levels of a problematic constituent exists, sampling may be required by DEQ.

With respect to constituents found in the most recent EPA Targeted National Sewage Sludge Survey (TNSSS), EPA does not have information at this time indicating a necessity to restrict application rates or modify the current acceptable limits for land applied biosolids. EPA states that “the results presented in the TNSSS Technical Report do not imply that the concentrations for any analyte are of particular concern to EPA. EPA will use these results to assess potential exposure to these contaminants from sewage sludge.” Although presence of certain targeted analytes was detected, EPA states that “it is not appropriate to speculate on the significance of the results until a proper evaluation has been completed and reviewed.” DEQ will continue to monitor EPA technical surveys to determine if any program changes are appropriate for the Virginia biosolids program.

Subject: [Enforcement of Biosolids Regulations and Permits](#)

Commenter: Graf, Charles, representing Citizens

Oversight of the sewage sludge "biosolids" program was transferred by the General Assembly from VDH to DEQ because DEQ would be able to better enforce the regulations. In the regulations draft is a section called "Compliance with Regulations and Disciplinary Action". Nowhere in this section is the word "shall" used, but only the weak and ambiguous word "may". As we're finding out here in Campbell Co., this very wording is allowing the department to say that no disciplinary action will be taken following the mistaken spread on 22 acres. DEQ claims that no harm was done and so there will be no consequences. When I get a speeding ticket and I claim no harm was done, my ticket won't be nullified. I'm responsible for my actions. The word "may" should be removed and replaced with "shall".

Commenter: Graf, Mary, representing Citizens

Regulations need to be able to be enforced. Such words as "may", "discretion", "modifications", "variances", "substantial compliance" render the regulations in fact unenforceable. And therefore lacking the ability to protect human health and the environment as required by VA Code.

The regulations are completely lacking in enforcement. Such words a "may", "discretion", "modifications", "Variances", and "substantial compliance", render the regulations unenforceable, and therefore lacking the ability to protect human health and the environment as required by VA Code.

Commenter: Powell, Mary, representing Applicators

The statewide management of the biosolids program should be consistent across the state. There needs to be consistency and predictability in the interpretation and enforcement of the biosolids regulations throughout the state.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

DEQ's current view of enforcement policy can best be described as "boys will be boys". If DEQ expects to issue permits that authorize lawful land applications, it must also develop enforcement policies and practices that ensure compliance with the requirements set forth in the Code. Without a clear commitment to enforce the regulations, DEQ cannot ensure that the requirements of the Code are implemented. Without that assurance, there can be no permits that can authorize lawful land applications of sewage sludge in the Commonwealth. There is a history of failing to enforce provisions required to ensure that health and the environment are protected. It ranges from the refusal to ensure that Virginia and Federal requirements that nitrogen not exceed agronomic rates, to Virginia's requirements that phosphorus not exceed agronomic rates, that sewage sludge not be applied on pollution sensitive sites; that health sensitive individuals be protected. DEQ refuses even today to stop applications in the case of permits that clearly fail to authorize any lawful land applications. Unless there is consistent and adequate enforcement of Code and regulatory requirements needed to ensure that the environment, health, safety and welfare are protected, DEQ cannot carry out its mandate to ensure that they are protected. In that case the Code prohibition against land application remains in effect. At a minimum, there needs to be a clear regulatory provision stating that repeated violations, whether or not enforced by DEQ automatically voids any permit held by the Permit Holder and such Permit Holder be precluded from land applying for a period of time. Without such clear language, it is not clear that a permit authorizing lawful land applications can be issued. "In the event of repeated violations of statutory and regulatory requirements by a Permit Holder, in addition to the penalties otherwise provided for, no land applications of sewage sludge may be made under permits issued to the Permit Holder in the Commonwealth of Virginia for a minimum period of five years."

Commenter: Stevick, Stephen M., representing Citizens

Suspected violations of regulations governing the use of treated sewage sludge for agricultural purposes should be handled, in the first order, as potential threats to human health and the environment. Immediate steps should be taken to determine whether or not they have occurred and whether the violation poses a risk to human health or wellbeing, livestock and/or to the environment and what remedial action is appropriate. Such confirmations should include, where appropriate, comprehensive monitoring and testing of the individuals, animals, and environment of concern. Records of these findings and actions should be maintained and be available for public review. Fines and sanctions should not be considered in lieu of, but in addition to, remedial actions to protect human health and the environment.

DEQ Response to Comments: Enforcement of Biosolids Regulations and Permits

The current inspection staff is dedicated to ensuring compliance with issued permits and the permittee is required to give DEQ staff notice prior to land application of biosolids so that unannounced site inspections may be conducted while land application of biosolids is in progress. In order to determine compliance with the law and regulations, DEQ is currently inspecting approximately 80% of the farms where biosolids is applied, and inspecting approximately 70% of the farms during land application activities. DEQ utilizes informal corrective action, as well as formal enforcement action, if necessary to ensure compliance.

Subject: [Environmental Concerns: Water Quality, Karst Topography, TMDLs, Slope and Buffers](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

The approval of the land application of imported sewage sludge is contrary to the efforts of the County, and other area stakeholders, to implement the Chesapeake Bay TMDL and WIP requirements to reduce pollutants, particularly phosphorus and nitrogen, entering the streams throughout the Chesapeake Bay watershed. EPA's Chesapeake Bay TMDL was made final on December 29, 2010. VA's Phase I WIP under the Bay TMDL establishes significant reductions in nitrogen (N) and phosphorus (P) throughout the Chesapeake Bay in VA, including the Shenandoah River watershed as part of the Shenandoah-Potomac basin. For the agricultural sector the WIP identifies several specific actions intended to meet the P and N reduction targets. Local governments, as well as farm operators, will be held accountable for level of effort and progress made in meeting the N and P allocations under the Chesapeake Bay TMDL. Imposing externally sourced biosolids on a jurisdiction where the local government disapproves, in part, because it imposes an extra, unplanned, source of N and P. This does harm to, and places an increased burden on our more environmentally responsible farmers, who will be faced with further lowering of their N and P allocations.

The regulations need to include a provision such as: Require that local government certification must be obtained for any proposed permit or permit modifications for the land application or storage of biosolids to verify the site(s) and proposed land application activity does not conflict with N and P allocations and activity or local ordinances required to be developed under the Chesapeake Bay TMDL, the associated VA WIP, and storm water management regulations and other watershed nutrient loading and storm water management mandates as required by EPA or DEQ for waterways which flow through that jurisdiction.

Commenter: Beck, Bobbi, representing Citizens

It seems like absolute insanity to dump sewage sludge into a floodplain near a children's play area. If that doesn't seem like a health risk to you why not just dump it into the river and be done with it. In essence it's the same thing. Certainly a better solution can be found!

Commenter: Brennan, Shannon, representing Self

In general, I would like to say that the further we keep biosolids from water sources and residences, the better. I support any moves in that direction. Having covered the topic of biosolids as a former reported for several years, it always seemed crazy to be dumping so much nitrogen and phosphorus into the Chesapeake Bay watershed when we are supposed to be removing them. I won't even get into the fact that we are largely clueless as to what is in biosolids.

Commenter: Broaddus, Lynwood, representing Farmers

Hillsides need the organic matter to help create a mulch layer, which in turn prevents

erosion. But hillsides cannot be spread for fear the biosolids will wash off. The stuff sticks, washing off is not a problem.

Commenter: Burleigh, Mary Ann, representing Citizens

(Conflicts with pending regulations regarding state and federal mandates on TMDL and storm water management regulations for the James River and Chesapeake Bay clean up and other watersheds.) Require obtaining local government certification for any proposed permit or permit modifications for the land application or storage of biosolids to verify the site(s) and proposed land application activity does not conflict with activity or local ordinances required to be developed under the Chesapeake Bay/James River TMDL and storm water management regulations and other watershed nutrient loading and storm water management mandates as required by EPA or DEQ.

Commenter: Chambers, Jennifer, representing Virginia Agribusiness Council

DEQ should narrow the new category of buffers in Table 2 for "water supply reservoirs" to "Public water supply reservoirs". Otherwise the term could be construed to include stock ponds and irrigation ponds.

Commenter: Clemmer, Richard, representing Farmers

I ask that you consider increasing the allowable slopes for the application of biosolids as mentioned by a previous speaker. There are a lot of areas where the current restrictions prohibit the use of biosolids where their application would help with soil fertility and would decrease runoff. The material never runs off and stays where it is put.

Commenter: Coulling, Philip, representing Rockbridge Area Conservation Council

In Rockbridge County, areas with Karst geology fall within the maximum pollution potential zone of the 1997 Central Shenandoah Planning District Commission county map based on EPA's DRASTIC model further indicating that Karst is an inappropriate setting for land application of biosolids. EPA relies on individual states to modify the general federal regulatory provisions to address area-specific conditions. Land application of biosolids should not be permitted in areas of Karst geology as mapped in the Virginia Department of Mines, Minerals and Energy Publications # 44, 83 and 167. Any requests for exceptions must be based on a site specific, certified geologic report with sufficient subsurface borings and other evidence that demonstrates that the proposed site is not underlain by, or in hydraulic connection with, Karst geologic conditions.

The prescribed setback from the sinkholes currently visible at the surface in the proposed regulations is inadequate to prevent the migration of sludge constituents either horizontally or vertically into the underlying solution features and fractures inherent in Karst carbonate rocks. The extreme rapidity and distances, and unpredictable pathways of subsurface flow in these aquifers which are widely used as drinking water sources and are home to several endangered Karst-dwelling species in the areas of western Virginia where Karst occurs, makes the risk of harm to human health and the environment from land application of biosolids unacceptable in this geologic setting.

We concur with the findings and recommendations concerning areas of Karst geology of

the professional geologists and hydrogeologists in the April 28, 2011 technical memorandum by Frits van der Leeden, et.al.

Commenter: Davis, Brandon P., representing Shenandoah County

Site approval based on Chesapeake Bay TMDL and Storm water Management Regulations: The proposed regulations do not provide assurance that the site(s) and proposed land application activity does not conflict with nitrogen and phosphorus allocations and activity or local ordinances required to be developed under the Chesapeake Bay TMDL, the associated Virginia Watershed Implementation Plan, and storm water management regulations and other watershed nutrient loading and storm water management mandates as required by EPA or DEQ for the North Fork of the Shenandoah River as a component of the Shenandoah/Potomac sub-watershed.

Site approval based on proximity to existing subdivisions and/or places of assembly: VPA-01579 was approved in spite of the presence of three public gathering attractions entirely within or immediately adjacent to, one of the approved land segments: The North Fork of the Shenandoah River, the publicly owned Meems Bottom Covered Bridge, and a privately owned corn maze. The Board of Supervisors continues to be concerned that such permits are approved or modified without regard to adjacent public uses, residential subdivisions and places of assembly.

Commenter: DiJoseph, Lawrence, representing Citizens

I object to the use of sewage sludge in "at risk areas". The 600 acre site in Shenandoah County in specific. The potential risks have already been noted and will again be brought up in the public hearing this April. Here again we find ourselves with an opportunity to watch our regulatory agencies in this matter, make decisions based on known potential hazards to people and surrounding water ways. I wonder just how they would react if this situation was taking place in their own neighborhoods. I support the Riverkeepers in their efforts to clean up our waterways and to make them safe for use today and to protect the ground water that we will be using in the future. It has already been proven that many areas of farm land have been over fertilized simply because the ground was never tested to see if it really needs more nutrients and what kind. To make things worse the area in question is in a know flood plain. Will all the sludge be washed away in the next spring storm? Do you know for sure? Do we want to take that risk? I for one do not. I can only hope and pray that these controlling agencies will act responsibly, keeping in mind their duty to protect the public, and do what is right for us all. Most of all not be influenced by outside pressures that have other interest in mind.

Commenter: Dixon, Bonnie, representing Madison County Residents

After considerable discussion about the need to exclude cattle from our streams to reduce pollution and emphasis on disposal of human waste in ways that reduce runoff, how can spreading sludge on farm lands make any sense at all?

Commenter: Dixon, Frank, representing Citizens

It appears to me that the proposed regulation works against the state's attempt to clean up the Chesapeake Bay. The state has appropriated funds and conducted numerous studies to find ways to stop polluting the bay. One of the ways the bay is currently being polluted is by rain

water runoff from polluted pasture and farm lands. This regulation would appear to increase the amount of pollutants on those lands, thus complicating the bay cleanup effort. This plan is so obviously flawed, I suspect there is skullduggery afoot. I will write to State Attorney General Cuccinelli requesting an immediate investigation to determine if my suspicions are correct. It just doesn't seem possible that the state would work against its own cleanup effort unless there were some sort of payoff involved.

Commenter: Elliott, Judy, representing Citizens

The legislators in Richmond are not doing their duty to protect the citizens of the Commonwealth. The State Constitution - Section 11 reads "It shall be the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment, or destruction, for the benefit and enjoyment and general welfare of the people of the Commonwealth." A lot of these people where they are spreading sludge do not consider this as an "enjoyment". There are a lot of health issues or they are elderly who worry about their health issues that they have every time that sludge is spread.

Commenter: Evans, Kristen Hughes, representing Chesapeake Bay Foundation

Almost 200,000 dry tons of biosolids are land applied to farm fields in Virginia's Chesapeake Bay watershed on an annual basis. While nitrogen and phosphorus content varies considerably, these biosolids contain approximately 19 million pounds of nitrogen and phosphorus, and therefore can pose a significant threat to the Bay's water quality if not properly managed. As part of the watershed wide effort to remove the Chesapeake Bay and its tidal tributaries from the federal impaired waters list, Virginia's Watershed Implementation Plan commits to reducing agricultural nitrogen loads by approximately 6 million pounds and agricultural phosphorus loads by approximately 1 million pounds by 2025. It is therefore critical that biosolids be handled in a manner that prevents the transport of nutrients to surface waters.

The Virginia biosolids regulations continue to rely on the federal U.S. EPA 503(b) regulations with respect to setbacks from surface waters. The federal rules, finalized in 1994, establish a 10 meter (33 feet) setback requirement. CBF recommends that the 33 foot setback be revised to be consistent with surface water setbacks required for poultry litter land application (per 9VAC25-630). Specifically, biosolids should not be applied within 35 feet of a surface water if there is a permanent vegetated buffer in place, or 100 feet without a permanent vegetative buffer. In addition to setbacks from surface waters, setbacks from other sensitive features should also be consistent with requirements for poultry litter. This revision is necessary so as to not to create an inappropriate competitive advantage for biosolids. Revising the setbacks to be consistent with 9VAC25-630 is also consistent with the VA Watershed Implementation Plan which calls for the establishment of permanent, riparian buffers of at least 35 feet or greater in width on 95 percent of VA's cropland, hay land and pastures.

Commenter: Gardner, Don, representing Farmers

Agriculture and forestry are Virginia's biggest industries. Virginia's agricultural exports are 9th in the Nation. I am a large animal Veterinarian with 41 years of experience. I have studied and researched information about biosolids and its use and application. Decided that it was an appropriate product to use. Farm has received the water quality of the year award and

conservation farm of the year award. Participate in a Veterinary Discussion Group for 10 years - Have never heard of a health issue, man or beast related to biosolids. The subject has never come up. Have just brought in 200 acres (2 years ago) that is "new ground", we have been waiting for these regulations to be completed so that this acreage can be permitted to receive biosolids. We cannot afford the commercial fertilizers that would be needed to bring this land into productivity. The current regulations are fine. Increasing the width of the buffers is not necessary. This product does not move. Where it is spread is where it stays. Buffers will not solve the odor problems. Odor moves with the wind. Excessive buffers will cut usable property on a farm. Use of an increased buffer will result in the use of poultry litter or commercial fertilizers on a greater portion of the property. These fertilizers are more mobile than biosolids.

Commenter: Gardner, Sam, representing Farmers

Use of biosolids on steep slopes - Biosolids does not runoff. The best way to get a vegetative growth on a steep slope is to apply biosolids. Recommend that the application of biosolids to steep slopes up to 20 percent slope be allowed in the regulation. Biosolids will stay where they are placed. Commercial fertilizers will runoff if applied to steep slopes.

Commenter: Gessner, Mary, representing Friends of the North Fork of the Shenandoah River
Biosolids application should not be allowed on Karst terrain or in flood plains.

Commenter: Graf, Mary, representing Citizens

There needs to be a permanent pH management plan so that metals and other toxic persistent chemicals can't mobilize, leach into groundwater, or be picked up by plants. It seems this should be the responsibility of the farmer so as to assure the safety of his soil.

Commenter: Hatcher, Roger F., representing Farmers

Related to land reclamation, there are many opportunities to stabilize farm fields with slopes greater than 15 percent by the use of biosolids. Criteria and flexibility should be included to allow this possibility when it is appropriate. I can show you a 30 percent slope established under DMME standards that would not vegetate to the excellent condition it is today without biosolids.

Within the constraints of the 503 Rule, minimize buffers. Buffers on the scale you propose have no control of odors and therefore will not reduce odor complaints. Large buffers actually increase the chance of nutrient runoff into ditches, since commercial fertilizers are usually very soluble compared to biosolids and subject to rapid runoff in heavy rain events.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

A new category of buffer was added to Table 2 for "water supply reservoirs". This term should be narrowed to "public water supply reservoirs". Otherwise the term could be construed to include stock ponds and irrigation ponds.

Neither the Chesapeake Bay TMDL or storm water requirements are specific to biosolids. Biosolids application permits do not allow the discharge of any biosolids constituents into state waters. In fact, many of the elements of the biosolids regulatory program (NMP requirements, setbacks to protect against discharge to state waters; compliance with conservation plans) not

only protect against any discharges but are consistent with the requirements of the Bay TMDL and storm water regulatory programs. There is no basis or need for any additional connection between the Bay TMDL and storm water requirements and the biosolids program.

Requirements that ponding must be corrected or that reference ponding should make clear that the requirements only apply if the ponding is taking place in the biosolids staging area (as opposed to anywhere on the farm). See, e.g., 9VAC25-32-545 B 9; 9VAC25-32-550 C 8.

Commenter: Henderson, Roger & Bev, representing Hurricane Hill Event Facility - Bedford

We are greatly concerned that the application of biosolids on adjacent farms may be contaminating our water supply, and it is certainly polluting the air we breathe. We operate an event facility - just last week a bride who has her wedding scheduled here in mid April asked me "are they going to spread biosolids next to you?" Needless to say her outdoor wedding would be ruined by the stench if biosolids were applied just before her wedding. Last year (April 2010) we narrowly avoided such a tragedy when the farmer who rents the hayfield adjacent to us agreed at the last minute to not allow the application of biosolids next to our event facility - they did apply to the rest of the farm, plus the farm across the road. In addition to our health concerns, we feel we have the right to operate our business without being negatively impacted by the thoughtless actions of biosolids applicators. Just last week we were told by a realtor that she is bound to disclose to any prospective buyer if biosolids have been applied to a piece of property listed for sale, PLUS if it has been applied to adjacent property. If biosolids are so safe, why is this disclosure necessary?? It obviously could impact the sale value of our property. The state of Virginia is allowing shady out of state operators to dump potentially toxic waste on VA farms with little or no oversight - the damage they could be causing could last for years!! Local officials have told me their hands are tied - that it is a state matter. In our opinion the state has failed to protect our health and property rights. Obviously the big bucks donated by Synagro lobbyists and other applicators has influenced their actions (or rather lack of action). Since the legislation is not going to outlaw the spreading of biosolids in Virginia, we urge DEQ to crack down on testing the content of EVERY truckload that is spread - random checks are totally inadequate!!! We would appreciate hearing back from you as to what new regulations are proposed/approved.

Commenter: Hewitt, Greg, representing Farmers

The use of commercial fertilizer in the buffers and around rock breaks without the organic matter found in biosolids to hold it in place increases runoff which runs into the streams. The application of biosolids on the land reduces the amount of runoff.

There is no erosion on the meadows only on the slopes. It is imperative to maintain the organic matter on slopes.

Commenter: Jones, V. Rea, representing Farmers

With the present buffer and drainage restrictions, one cannot spread biosolids near a creek, lake, well, or drainage area. Even a neighbor boundary is buffered unless approval is granted by neighbor to release from requirement. In contrast, there are no restrictions or buffers on spreading of commercial fertilizer.

Commenter: Kelble, Jeff, representing Shenandoah & Potomac River Keepers

Application of sewage sludge on slopes in excess of six percent should be banned. The proposed regulations ban the application of sewage sludge on slopes with grades greater than 15 percent; however, this standard appears arbitrary and does not adequately protect the environment. As the slope increases, the likelihood increases that sewage sludge will run off the slope and either flow into state waters or pool, creating a "hot spot" of sludge in the environment from which toxics may leach. The EPA, when studying the effects of the land application of sewage sludge, used risk models with slopes of six percent or less. To our knowledge, there have been no scientific studies that have examined the effects on the environment of applying sewage sludge on slopes in excess of six percent. Absent such studies, it would be impossible for the Board to conclude that regulations allowing the application of sewage sludge on slopes in excess of six percent protect the environment, as required by the Virginia Code. As such, the proposed regulations should ban the land application of sewage sludge on slopes in excess of six percent.

Riverkeeper understands the need for the reuse of sewage sludge and biosolids (collectively referred to herein as "sewage sludge") as a soil amendment, but such reuse is only beneficial if done responsibly. Section 62.1-44.19:3 B of the Virginia Code provides that regulations concerning the use of sewage sludge must ensure that "land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment..." and that "the escape, flow, or discharge of sewage sludge into state waters, in a manner that would cause pollution of state waters...shall be prevented." In other words, the regulations must protect our water supply.

The buffers provided for in 9VAC25-32-560 - Table 2 must be expanded. The wider the vegetated buffer, the more protection afforded the environment. At a minimum, the proposed regulation should require a 170-foot vegetated buffer for streams and tributaries designed as a Public Water Supply under the Water Quality Standards, perennial streams and other surface waters, and intermittent streams and drainage ditches. Currently, the proposed regulations provide for differing buffers for each of these bodies of water; however, there is no logical basis for distinguishing between differing bodies of water. The most restrictive buffer must apply to all bodies of water, as many perennial streams, drainage ditches and intermittent streams eventually flow into streams and tributaries that are designated as Public Water Supplies under the Water Quality Standards. Therefore, any contaminants contained in perennial or intermittent stream will negatively impact the public water supply. As such, the same buffer requirements should apply.

The proposed regulation should also expand the buffers in 9VAC25-32-560 - Table 2 to rock outcrops and limestone rock outcrops to at least 170 feet and require that they be vegetated, unless these outcrops are not situated on a Karst topography, in which case surface application and incorporation should be banned.

The proposed regulations should prohibit the application, staging and storage of sewage sludge atop Karst topography. We were please to see that the Board included in the proposed regulations a ban on the staging of sewage sludge upon Karst topography; however this ban should be extended to prohibit not only the storage, but the application of sewage sludge upon

Karst. If staging sewage sludge is banned due to the potential impact to the groundwater, a position we support, then it only seems logical that the long term storage and subsequent land application of sewage sludge to these sensitive areas also should be banned. We believe that in order to meet its statutory duty to adopt regulations that ensure that land application of sewage sludge is performed in a manner that will protect the environment and prevent the discharge of sewage sludge into state water, the Board must ban not only staging of sewage sludge, but also the storage and application of sewage sludge, on Karst topography.

The proposed regulations should require that adequate buffers are in place to protect the state waters from runoff contaminated by sewage sludge. The minimum buffer zone requirements set forth in Table 2 to section 9VAC25-32-560 provide for minimum setbacks from certain features to areas where sewage sludge may be applied; however, the distances set for the in Table 2 appear to have been arbitrarily chosen, and in any event, are inadequate. The proposed regulations must require that the buffers be forested or vegetated, as only vegetated buffers provide adequate protection from contaminants in storm water runoff. A scientific evaluation of the effects that vegetated buffers have on storm water runoff found that a 15-foot vegetated buffer provided a five percent reduction in nitrogen from runoff and that a 170-foot vegetated buffer removed more than 95 percent of nitrogen. For phosphorus that same study found that the 15-foot vegetated buffer removed 62 percent of the total phosphorus load, while the 170-foot buffer removed 90 percent. The scientific evidence is clear: significant vegetated buffers are necessary to adequately protect the environment from contamination in storm water runoff. The setbacks proposed in Table 2, if not vegetated, provide a fraction of this protection. For that reason, the proposed regulations must require that any buffer be vegetated.

Commenter: Kelble, Jeff, representing Shenandoah Riverkeeper

All rivers that are open to recreational use should have extended buffers.

Echo some of the environmental and health concerns noted in previous testimony. I have previously provided comments against approving of the Shenandoah Permit for the application of biosolids by Recyc Systems. As a society we need to recycle some of the components of sewage sludge. There are concerns about the phosphorus content of the soil and biosolids. The Shenandoah Valley is a hot spot for phosphorus issues. We have not managed phosphorus well. The proposed regulations do not provide a solution to the phosphorus issue. We should look for situations to reuse sludge, but should also be aware that there are some situations where it should not be used. It should not be applied in Karst terrain or flood plains.

The difference between intermittent, perennial and drainage ditches current have separate setbacks. These setbacks are arbitrary, there is no legal basis for the differences. They should be consistent since when it rains they all will carry runoff to waterways. The setbacks should be set based on slope and available coverage and the regulations should reflect this. These could be handled by a Nutrient Management Plan but the fall back will be to what is identified as the appropriate buffer in the regulations. The regulation should be entirely prescriptive.

Commenter: Kelble, Jeff, representing Shenandoah& Potomac River Keepers

The storage, staging and application of sewage sludge should be banned in areas prone to flooding. The proposed regulations prohibit the long-term storage of sewage sludge at a facility

that is subject to inundation produced by the 100-year flood/wave action as defined by the U.S. Geological Survey or equivalent information (hereinafter referred to as a "100-year floodplain"); however there is no similar ban on the staging or application of sewage sludge at a facility located in the 100-year floodplain. There is no logical or scientific basis for distinguishing between the storage and application of sewage sludge: flood waters can easily transport sewage sludge, and its various toxic components, from land where it is stored, staged or applied and into state waters, thereby contaminating the environment. As such, we believe that the proposed regulations should be revised to ban the storage or application of sewage sludge in any area that is subject to inundation produced by the 100-year flood/wave action as defined by the U.S. Geological Survey to ensure that the environment and state waters are protected from releases of sewage sludge caused by significant flooding events that are occurring with increasing frequency.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ's setbacks of 25, 50, or 100 feet from streams, rivers, ponds, lakes, bogs, swamps and other wetlands do not work in the real world. No sewage sludge should be spread on any field containing any stream, river, pond, lake, bog, swamp or wetland. No setback works.

Commenter: Land, Dr. Lynton S., representing Citizens

The "Economic Impact" summarized in the Virginia Regulatory Town Hall Form: TH02 is grossly inadequate. It projects economic costs for implementation and to "individuals, businesses or other entities" but it fails to acknowledge the economic cost of pollution caused by the land application of such an inefficient "fertilizer". From an economic standpoint, disposing of sewage sludge by land application is much more costly to society, and to Virginia's State and County income, than alternative uses like biofuel. Bay N pollution caused by the land application of sewage sludge exceeds the N pollution caused by septic systems and accounts for a significant difference between Virginia's 2002 N discharge to Chesapeake Bay (77.8 MPY) and the reduction goal required by EPA's 2025 Draft Allocation (53.7 MPY). The amount of P that is disposed (squandered) in excess of agronomic need by the land application of sludge is much larger than the difference between Virginia's 2002 P discharge to Chesapeake Bay (9.8 MPY) and EPA's 2025 Draft Allocation for P (5.4 MPY). If land application was P-based, using the numerical limits in "Standards". As both Federal and State law require, and Bay water quality improved proportionately, the increased value of waterfront property and recreational and commercial fisheries would far exceed the value of land application to the agricultural and wastewater sectors. No analysis of "Economic Impact" by the State can ignore these incontestable facts.

Commenter: Lanier, Paul O., representing Farmers

I am a grain and cattle farmer in Goochland County. I have used biosolids for 30 years and have not seen anything wrong that has resulted from the use of biosolids. Biosolids stick where they are applied, they do not runoff. Goochland County has rolling topography which results in some slope where the current slope restrictions result in the inability of using biosolids on those slopes. Those slopes are eroding from the lack of nutrients inability to apply biosolids. The use of commercial fertilizer on these slopes results in runoff of nutrients. Nothing has helped the eroding soils in Goochland County more than biosolids. I ask that the current slope restrictions be reconsidered to allow for the use of biosolids on these steeper slopes.

Commenter: Laurrell, R. David, representing County of Campbell

(Conflicts with pending regulations regarding state and federal mandates on TMDL and storm water management regulations for the James River and Chesapeake Bay clean up and other watersheds.) Require obtaining local government certification for any proposed permit or permit modifications for the land application or storage of biosolids to verify the site(s) and proposed land application activity does not conflict with activity or local ordinances required to be developed under the Chesapeake Bay/James River TMDL and storm water management regulations and other watershed nutrient loading and storm water management mandates required by EPA or DEQ.

Commenter: Layne, Bill, representing Citizens

Our governing bodies and the EPA are inconsistent and unreasonable. On one hand you want to clean up the Chesapeake Bay, and on the other you advocate spreading toxic sludge on our land. Sludge has not yet been proven to be safe to people, animals, the environment, or the Bay. Most reasonable, thinking people would like to see sludge use on farmland outlawed completely. But until then, I agree that we need more rigid testing and monitoring and wider buffer zones for people who own land or live near being sludged.

We need to restrict the use of sludge on slopes greater than 10 degrees. Flash floods and heavy rains cause surface water to flood adjacent land and streams. It will pollute springs and wells. And yes, some of us still use springs. I for one, have used the same spring for over fifty years as my only source of water.

Commenter: Lorien, Joy, representing Citizens

How the quality of our environment is sanctioned by a department whose duty is to it is beyond me.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

Most conventional farmers complain about the cost of nitrogen for fertilizing their fields, citing the use of free sludge as a panacea to all of their mismanagement practices. There are no streams in Madison County without an e-coli problems - several also test positive for unacceptable levels of PCBs. Madison is supposed to be a fly fishing mecca - however, no fish can be eaten because of the pollution in the streams.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Geologically Sensitive Sites: Although the use of sludge may be less risky in some regions of the Commonwealth, the proliferation of Karst landscapes characterized by sinkholes, solution channels and caves makes areas such as the North Fork watershed too risky for spreading sewage sludge. Our water is directly affected by what happens on the ground surface. Dr. Greg Evanylo of the Department of Crop and Soil Environmental Sciences at Virginia Tech has written that potentially unsuitable areas for sludge application include: areas bordered by ponds, lakes, rivers, and streams, steep areas with sharp relief, areas of Karst geology, rocky, shallow soil, and other environmentally sensitive areas, such as floodplains. Application of

sludge in many of the fields in the North Fork watershed as well as floodplains across the state poses an unacceptable risk of contamination of streams, rivers and groundwater, both of which serve as drinking water sources.

Given an incomplete analysis of what is in the specific sewage sludge and the lack of scientific information regarding the fate, transport and environmental effects of many of the chemicals that may be found in sewage sludge, DEQ cannot confidently determine what an adequate setback distance will be to protect water quality, aquatic organisms, endangered species or human health. Because of the adequacy (i.e., protectiveness) of a buffer cannot be established with any certainty, application of sludge in areas of Karst geology and floodplains poses an unacceptable risk of contamination of surface and groundwater, both of which serve as drinking water sources. 9VAC25-32-560 should prohibit land application of biosolids on areas designated as floodplains, on Karst landscapes characterized by limestone outcroppings, sinkholes, solution channels, and caves and on slopes greater than 7%. Barring that, minimum buffers around all environmental features listed in Table 2 should at least equal the 35 foot buffer required by NRCS standards, regardless of the method of application.

I would echo the comments made by Ms. Hughes, Mr. Atwood, and Ms. Gessner. The revised regulations do not address or alleviate our concerns which remain (1) the largely unknown content of the sludge, (2) application of sludge to geologically and ecologically vulnerable sites, and (3) insufficient requirements in the regulations to protect the environment or human health. We object to the revised regulations because they do not address the failure of the existing regulations to protect the environment both for humans and wildlife. Therefore, we look forward to DEQ publishing revised regulations that protect the environment from land application of sewage sludge.

Sewage sludge should not be applied to slopes greater than 7 percent.

Standard permit requirements should be prescriptive enough to ensure protection of human health and the environment in all cases. Providing DEQ the ability to add conditions on a case-by-case basis to account for situations that may warrant additional scrutiny is not sufficient. DEQ has demonstrated an unwillingness to address unique situations (such as Karst geology). This is understandable because there is a lot of pushback from applicants to not require anything over and above the bare minimum allowed by the regulations. Therefore, the regulations must be strengthened to ensure that all applications of sludge are done in as safe a manner as technologically possible.

The current state of knowledge regarding sewage sludge is insufficient to ensure that DEQ meets its mission to protect and enhance the environment of VA and promote the health and well-being of the citizens of the Commonwealth. Given an incomplete analysis of what is in the specific sewage sludge and the lack of scientific information regarding the fate, transport and environmental effects of many of the chemicals that may be found in sewage sludge, DEQ cannot confidently determine what an adequate setback distance will be to protect water quality, aquatic organisms, endangered species or human health. The draft regulations require buffers around sites sensitive to the application of sewage sludge. However, we recommend doubling the draft buffers for water supply wells or springs, perennial and intermittent streams,

surface waters, and agricultural drainage ditches for any time of the year sewage sludge is applied. In addition, we recommend excluding completely some areas from land application of sewage sludge. These are flood plains (which are easily identifiable across the State) and Karst landscapes characterized by sinkholes, solution channels and caves.

There is no provision in the state constitution that requires the state to provide easy disposal of sewage sludge or that entitles farmers and others to receive free fertilizer. However, Article XI, Sec. 1 of the Constitution of the State of Virginia establishes that it is "the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment or destruction,..." Pursuant to that, Virginia State Code Section 62.1-44.19:3.B requires that the State Water Control Board "...adopt regulations to ensure that...11) land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment; and iii) the escape, flow or discharge of sewage sludge into state waters, in a manner that would cause pollution of state waters...shall be prevented." As was concluded by the Panel of Experts and reinforced by the EPA study of sewage sludge, much additional information is needed to ensure protection of health and the environment. DEQ and the State Water Control Board should use all the flexibility they have available to them under federal and state law to regulate the use of biosolids within the Commonwealth in a manner that actually ensures those protections.

To ensure compliance with the permit and facilitate enforcement, entire fields should either be included or excluded from the permit, depending on the suitability of the field as a whole. Fields that include flood plains, have Karst features, fractured bedrock or rocky, shallow soils, are highly erodible or have slopes greater than 7% should be excluded in their entirety. At a minimum, to facilitate delivery of the appropriate tonnage of material to each site, the total acreage of the permitted area, by farmer, should be recalculated and specifically identified in the permit.

Commenter: Nelson, Bill, representing Farmers

Have seen great results with the use of biosolids to improve eroding areas. The slope restrictions prevent the farmer from putting much needed organic matter and nutrients found in biosolids on eroding slopes, where the application of commercial fertilizers is not effective in preventing erosion.

Commenter: Pfothenauer, Peter, representing Shenandoah River Keeper

Please consider regulations that prohibit the application of these products in the flood plain, near places where people live or children play or go to school, or in areas that could contaminate drinking water. It's depressing to drive to a beautiful rural spot on the Rapidan River on RT 522, prepare to put in my kayak to fish, only to see signs along the field by the highway and river publicizing the use of biosolids on land that floods every year.

Regulate the use of these substances to protect our water ways from the harmful impacts of the increased nitrogen and phosphorus load caused by runoff after rainfall on treated properties. I have no desire to fish and swim in a river filled with this crap after our sewage treatment plants have worked so hard to remove it from their discharge.

Commenter: Sensabaugh, Donna, representing Self

I'm also concerned that he's allowed to spread on property through which a creek runs (Goose Creek in Bedford County).

Commenter: Sligh, David, representing Riverkeepers

Because sewage sludge (biosolids) contains numerous toxic and harmful constituents, some of which must reach state waters and violate water quality standards if the sludge is stored or land-applied on Karst terrain, Virginia officials should not permit these activities on any land with a Karst area.

Concentration on risks of land-based handling and spreading do sewage sludge and the pollutants is contains is especially vital for Karst areas. These areas are extensive in Virginia. Waters in Karst areas are universally-acknowledged to be extremely vulnerable to pollution, because of the very close connection between materials and activities at the land surface and ground and surface waters.

The DEQ minimum monitoring and sludge management requirements proposed fail to reflect or incorporate the vast body of scientific knowledge regarding threats that surface activities pose to ground and surface water bodies, humans, and biological resources in areas with Karst terrain, such as those present in large areas of Virginia.

The proposed regulatory action (amending portions of 9VAC25-32) requires neither adequate monitoring and site assessments nor appropriate management standards for the storage and handling of treated sludge to provide even minimal assurance that ground and surface water quality will be protected in many parts of Virginia.

The requirements fail to account in any way for the fate and transport of certain pollutants, including arsenic, in setting management and monitoring standards.

Commenter: Speck, W.B, representing Farmers

Would ask the Board to consider increasing the amount of slope where biosolids can be applied in a permanent vegetated state from 15 to 20°.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Applications of sewage sludge on pollution sensitive sites are clearly prohibited by statute. However, by regulation and by policies and practices DEQ fails to adequately identify pollution sensitive sites. At a minimum, the regulations must require that all pollution sensitive areas be identified and excluded before any issued permit can authorize lawful land applications. Permit Holders and landowners must be required to provide certifications that no part of any site has pollution sensitive areas. If such certifications prove to be incorrect, the sites must be automatically removed from the permit, unless where provided for in the permit, those areas and adequate buffers are immediately put in place when it has been determined that an area is pollution sensitive. It is therefore clear that existing regulations, the draft regulations, as well as DEQ policies and practices do not ensure that either health or the environment is protected when sewage sludge is land-applied under issued permits. Nor does DEQ have in place policies and practices to implement regulatory requirements. Thus the Board is not in a position to issue

permits to lawfully land-apply treated sewage sludge.

DCR has clear expertise in protecting the environment from nutrient loss. Accordingly, for buffers and other nutrient restrictions, as well as pollution sensitive sites, DCR recommendations must be minimum permit requirements. Thus the following provisions are examples of the types of provisions needed: "Fn4: No buffer shall be less than buffers that may be recommended by the Virginia Department of Conservation and Recreation unless DEQ can document that a lesser buffer would ensure that health and the environment was protected..." "Sites shall be deemed pollution sensitive sites where DCR recommends that there be no land applications of sewage sludge unless DEQ documents that health and the environment would be ensured if applications were made on such sites." Since DCR's focus is nutrients, DEQ must independently evaluate areas that may also be subject to pollution from pollutants other than nutrients. Except to the extent that sites may be eliminated due to nutrient pollution, DEQ currently has nothing in place to identify and exclude sensitive sites when it comes to other pollutants. DEQ cannot rely on DCR's nutrient management practices to protect the environment from pollutants other than nutrients present in sewage sludge. DEQ must establish buffers sufficient to protect the environment as well as buffers sufficient to protect health.

DEQ has included provisions that are in violation of its obligation to ensure that environment is protected. Perhaps the most obvious is the buffer waiver provisions which provide: "The buffer to occupied dwellings may be reduced or waived upon written consent of the occupant of the dwelling." (9VAC25-32-560-B(3)(g)(3) fn2); "Property line buffers may be reduced or waived upon written consent of the adjacent property resident or landowner." (9VAC25-32-560-B(3)(g)(3) fn6. Circumstances exist where the waiver provision would allow a landowner to thwart DEQ's statutory mandate to ensure that the environment is protected exist. By inclusion of the buffer waiver language, DEQ violates its mandate to ensure that sewage is not applied on pollution sensitive areas or in a manner that does not ensure that health is protected. If there are any circumstances when waivers might otherwise be permissible, any waiver provision must include protective language such as: "No waiver will be allowed unless the Permit Applicant or Permit Holder documents that the area otherwise qualifies for land application and provides to DEQ a written waiver (reflecting informed consent) by adjoining landowners and residents including all occupants of dwellings as well as by all who may be exposed to the sewage sludge, together with documentation that applications pursuant to the proposed waiver will not result in applications on pollution sensitive sites or otherwise adversely affect the environment or the health, safety or welfare of those who would be exposed."

Landowners have a responsibility to apprise DEQ and the Permit Applicant/Permit Holder of the presence of known pollution sensitive areas on any proposed site. That could be accomplished by having the following certification requirement: "Landowners are in a unique position to be aware of pollution sensitive areas in proposed sites. Accordingly, Landowners shall certify that they have brought to the attention of the Permit Applicant or Permit Holder and DEQ all known or suspected areas that might be pollution sensitive, and that they will be made aware of any additional pollution sensitive areas that Landowners may later become aware of. Landowners further certify that they will bring to the attention of the Permit Holder and DEQ if they become aware that areas covered by the permit may be pollution sensitive."

Permit Holders have a responsibility to apprise DEQ and the Permit Applicant or the Permit Holder of the presence of known or suspected pollution sensitive areas on any proposed site. That could be accomplished by having the following certification requirement" "Permit Applicants and Permit Holders are required to identify areas that may be pollution sensitive. Accordingly, Permit Applicants and Permit Holders shall certify that that have made diligent efforts to identify and exclude all pollution sensitive areas; and have brought, or if identified after a permit is issued will bring, to the attention of DEQ all suspected areas that might be pollution sensitive and withhold land applications until DEQ advises whether, and under what conditions land applications can be made on those sites."

Pollution sensitive sites can adversely impact health as well as the environment. Thus any definition must reference both: "Pollution sensitive sites are sites with characteristics that are more vulnerable to pollution that can adversely impact both the environment and health."

The Board is authorized to increase the fee if the amount is not sufficient to ensure that health and the environment are protected. That includes reasonable testing costs to ensure the same. Thus the only cap must be the reasonableness of the proposed tests. Language is required to ensure that there will be reimbursement for reasonable testing as follows: "All reasonable costs to test sewage sludge shall be reimbursed. Reasonableness shall be directly related to the extent that DEQ has otherwise ensured that health sensitive individuals will not be exposed and pollution sensitive sites identified and properly buffered out. The constituents tested for shall not be limited to heavy metals and nutrients. If the funds are not adequate to reimburse those reasonable costs, the Board shall increase the fee as needed to provide such reimbursement."

The draft regulations fail to require adequately identification and exclusion of pollution sensitive sites, or minimum buffers based on current science, or any science at all. Proposed buffers were established based on sold science, allowing applications on large pollution sensitive sites. Moreover, many pollution sensitive areas prohibited by regulation have simply not been identified. In other instances sewage sludge is allowed on prohibited pollution sites simply because no one pays attention to the requirement. It is essential that the regulations preclude pollution sensitive sites by clear language such as: "No sewage sludge may be land-applied on pollution sensitive sites. Such sites shall be excluded prior to the issuance of a permit ad/or the addition of additional sites to an existing permit. Permit Applicant or Permit Holder and the landowner shall certify that based on due diligence all pollution sensitive sites have been identified and excluded, DEQ shall be notified and no sewage sludge will be land-applied on such sites. If engineering and/or other studies have not been undertaken, Permit Applicant or Permit Holder shall document that such studies were not required to ensure that all pollution sensitive sites have been identified."

The EPA risk assessment model used slopes limited to 6 percent. The current regulations allow land application on slopes up to 15 percent. With the exception of efforts by DCR to develop management plans to reduce the adverse impact of sewage sludge nutrients applied on those higher slopes, DEQ has made no effort to confirm by documentation that the environment is protected when applications are made on slopes in excess of 6 percent. Thus, it cannot be

documented that applications on slopes in excess of 6 percent protect the environment. Until this is addressed, the regulations must include the following prohibition: "No applications shall be allowed on slopes in excess of 6 percent unless the Permit Holder can document that the environment will be protected if sludge is land-applied on slopes between 6 and 15 percent."

Commenter: Ustun, Jonathan, representing B.A.S.S. Federation of America

Virginia is too classy a place to accept out of state sludge: As a member of the BASS Federation of America, Virginia Chapter, I oppose anything that weakens water quality in the already over nutrified Shenandoah and Potomac Basin. This plan craps on the Potomac River and Shenandoah. Thousands of people travel from out of state each year to fish these rivers, shopping in our malls and staying in our hotels. As a fisherman concerned with the economy, I am embarrassed by the Governor's stance on fighting the EPA's modest goals to clean up our rivers and the Bay. I certainly oppose spreading sewage sludge anywhere near floodplains. Our recreational resources have tremendous economic development potential if managed intelligently. Sales tax receipts, clean recreational tourism, a cleaner river. This is the virtuous circle that should be our guiding principle in matters that affect our rivers, our state treasures.

Commenter: van der Leeden, Frits, representing Rockbridge Area Conservation Council

The concern about land spreading of biosolids is primarily because of the vulnerability of Karst aquifers to contamination by soluble hazardous and toxic components of the waste. In most Karst areas, soils are thin and the land surface is usually dotted with solution openings and sink holes, which along with less obvious secondary porosity in the overburden, allows immediate access of contaminants to the aquifer and the water table without any filtration. Once into the water zone, contaminants can spread quickly to adjacent areas. Because groundwater flow patterns in a Karst aquifer are almost impossible to determine, the extent of contaminated groundwater cannot be mapped and contamination will only be noticed once pollutants reach a discharge area such as a spring, lake, or water well. Remediation of Karst aquifers is also a problem. The only way to prevent pollution of ground and surface water in Karst areas is to exclude this vulnerable area from any type of dumping or disposal of sludge and biosolids on the land surface. The area of the Commonwealth of Virginia underlain by carbonate aquifers (VA DMME Publication # 44, 83 and 167) is large enough to justify this action to protect the general health of the public and the environment.

DEQ Response to Comments: Environmental Concerns: Water Quality, Karst Topography, TMDLs, Slope and Buffers

Comments were received expressing concern that biosolids land application would contribute to water quality problems, specifically related to current challenges in the Chesapeake Bay watershed. The Virginia Pollution Abatement Permit Regulation prohibits discharge of pollutants, including nutrients, solids and pathogens, to state waters from regulated land application sites and storage facilities. The regulations are established to manage the land application of biosolids in a manner that prevents runoff into surface waters and groundwater. Therefore biosolids do not contribute to the local nitrogen and phosphorus allocations any more than other well-managed agricultural operations.

Biosolids are land applied as a source of nutrients and organic matter on existing agricultural

land that would otherwise use chemical fertilizers. Unlike the chemical fertilizers traditionally used, the biosolids are a “slow release” nutrient source and therefore do not dissolve and release all of the nutrient content during the first few rain events. The organic matter in the biosolids helps to build and stabilize the soil thereby reducing erosion and runoff in the long term.

The Federal regulation, 40CFR part 503, requires a 10 meter (33 ft) setback from waters of the United States. In 9VAC25-32-560.B.3.e., the setback from surface waters has been modified to be consistent with the state and federal Concentrated Animal Feeding Operations (CAFO) regulations, whereby a 100 ft setback is required unless a 35 ft vegetated buffer is present. A definition for “vegetated buffer” has been added to both the VPA and VPDES regulations that is also consistent with the CAFO regulations. This requirement encourages the establishment of vegetated buffers adjacent to surface waters, which also promotes nutrient reduction goals established by the Chesapeake Bay Watershed Implementation Plan and other Total Maximum Daily Load (TMDL) implementation plans. In regard to other features, increased setbacks have been proposed, including: open sink holes, 100 ft.; public water supply (PWS) reservoirs, 400 ft.; and segments of streams designated as PWS, 100 ft.

In addition to the increased setbacks to state waters, the option to reduce the setback by incorporation has been removed, partly to adhere more closely to VDH recommendations and also to encourage soil conservation and quality. Soil disturbance works contrary to soil conservation goals, and runs contrary to the soil quality building practice of reducing tillage. The option to incorporate biosolids during time periods when floodplains are prone to flooding has also been removed for the same reason. Dewatered biosolids are moist and sticky (due to the polymers added in the dewatering process), which causes the material to cling to the surface of the ground when land applied and generally stay in place when dry. Incorporation does, however, remain an option for reducing odor, and is appropriate in some cases.

The setback to limestone rock outcrops and closed sinkholes remains at 50 ft., and the setback to wells and springs remains at 100 ft. 9VAC25-32-560.B.2 also has restrictions regarding depth to bedrock and depth to surface water. These restrictions have not been changed; biosolids may not be land applied where bedrock or surface water is less than 18 inches below the surface of the ground.

The aforementioned buffer and setback restrictions for the land application of biosolids provide a regulatory framework that is protective of Virginia’s rivers and streams, the Chesapeake Bay, Karst topography and groundwater.

In regard to slopes, technical recommendations from soil conservation professionals and field experience of DEQ inspectors demonstrate that application of biosolids on slopes between 7 and 15% can be accomplished without negative environmental impact. The biosolids organic material is useful in establishing a stand of permanent vegetation on slopes to prevent erosion.

Subject: [Exceptional Quality \(EQ\) Biosolids, Distribution and Marketing](#)

Commenter: Barker, Maurice, representing Florida Department of Environmental Protection

Also, can a facility or person give away bulk quantities of Class A EQ pellets (above 90% TS) and not be registered as fertilizer as well as not have to come up with a nutrient management plan? If so, what about the farmer or person who accepts the biosolids? Does this second person (the farmer, land owner, or other third party) have to do anything under the rule?

Commenter: Lohr, Matthew J., representing VA Department of Agriculture and Consumer Services (VDACS)

We understand that exceptional quality biosolids may be distributed in Virginia for use as fertilizers, soil amendments, or horticultural growing media. Exceptional quality biosolids that are offered as soil amendments or horticultural growing media are required to be registered with VDACS pursuant to § 3.2-3607 of the Code. However, if exceptional quality biosolids are offered as fertilizers, you should note that not all such biosolids so offered would require registration. The determining factor is whether the exceptional quality biosolids is offered as a commercial fertilizer or as a specialty fertilizer. The fertilizer statute differentiates between "commercial fertilizer" and "specialty fertilizer". Commercial fertilizer means "a fertilizer distributed for farm use, or for any other use, other than any specialty fertilizer use." Specialty fertilizer means "a fertilizer distributed for nonfarm use, including use on home gardens, lawns, shrubbery, flowers, golf courses, municipal parks, cemeteries, greenhouses and nurseries." Thus, exceptional quality fertilizers that are offered as commercial fertilizers will not be required to be registered with VDACS. However, the generator of such products would still need to be licensed by VDACS and would be required to file the appropriate tonnage and statistical reports.

Commenter: Lorien, Joy, representing Citizens

Myth: Class A EQ sludge is so safe you can eat it. Fact: Class A EQ sludge can legally contain up to 32 mg/kg of arsenic, 14 mg/kg of cadmium, 10 mg/kg of mercury, 300 mg.kg of lead, copper and zinc way in excess of what is needed for healthy crops, as well as potentially harmful organic chemical compounds and viable disease-causing pathogens. Yet use of this material is essentially unregulated in the state.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

The generation and use of exceptional quality (EQ) biosolids should be encouraged. One means of providing an incentive is to exempt EQ biosolids from the general requirements.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The language referencing Class A is totally confusing. The purpose of the Class A provisions is to set the criteria for Class A Sewage Sludge (reduced pathogens) and to recognize the reduced risk of pathogens in Class A by reducing certain specific land application requirements. However, Class A sewage sludge poses all of the other risks associated with land applied sewage sludge, ranging from excessive nutrient applications to inadequate buffers to protect health sensitive individuals and the environment from the many other potentially harmful constituents. Based on the confusing language changes, it is necessary to avoid the

inadvertent failure to ensure that all permit restrictions not specifically premised on the presence of pathogens apply to Class A. That could be accomplished with the following language: "Notwithstanding anything in these regulations, Class A Sewage Sludge shall remain subject to all land application limitations that apply to Class B Sewage Sludge other than those limitations that relate solely to the presence of pathogens, including by way of example, nutrient limitations, buffers needed to otherwise protect health and the environment, notice, etc.:

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed regulations would harm the state's Exceptional Quality biosolids program by requiring additional testing for organics and requiring a nutrient management plan for certain Class A materials.

DEQ Response to Comments: Exceptional Quality (EQ) Biosolids, Distribution and Marketing

EQ biosolids, which meet the state and federal standard for distribution and marketing, are exempt from the management practices and access restrictions, therefore it is imperative that these products meet high standards. In most cases, pretreatment programs and other industrial restrictions will address toxics. However, it may be necessary to screen for certain toxics if facility specific issues have been identified. Further, in the case where municipal solid waste is composted with biosolids (and not subject to pretreatment programs), screening for organic chemicals would align with the requirements specified in the solid waste regulations. The table has been removed from the regulations, as it was there only as example. Any actual organics testing would be based on any site-specific issues identified.

For the distribution and marketing of exceptional quality (EQ) biosolids, NMPs are not required when this material is distributed and marketed, similar to commercial fertilizer or commercially available soil amendments. These cases include dry, pelletized material, which is sold at a cost to a farmer or fertilizer distributor, and could be mixed with other fertilizer materials to create a more balanced product. Other EQ materials include compost or soil mixes which would be used in potting mixes, amending soil or landscaping uses. The original proposed regulation included an exemption for NMPs intended to exclude these uses. Based on comment from persons currently marketing these types of materials, alternate language is proposed in the final regulation. This language retains the exemption for dry, pelletized material, but alters the language used to describe biosolids soil blends and composts. The exemption for these materials is based on intended use (land application on agricultural operations) rather than the moisture or carbon:nitrogen ratios in the material. A NMP would be required for land application of an EQ material that is produced as a dewatered cake. Such materials are not easily blended, would likely not be bagged for commercial sale, and would be land applied using a method very similar to that of a Class B material.

Subject: [Fees](#)

Commenter: Broaddus, C. Bates, representing Farmers

Increasing the fees on applications may seem reasonable, but I see many small farmers being dropped from consideration for permits because applicators cannot justify the cost. This will be sad because the farmer who needs the cost savings and yield boost the most will not get the help because he is a small farmer.

Commenter: Hatcher, Roger F., representing Farmers

Redirect the primary roles of the field inspectors to identifying farming and structural changes that control field runoff. The primary tools could and should be native vegetated strips, complemented by pond construction on small streams and VDOT style sediment traps at the end of small swales.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The exemption from the fee requirements for EQ Class A biosolids is appropriate and provides an incentive for the use of higher quality biosolids. DEQ should consider whether there are opportunities to provide similar incentives elsewhere in the proposed regulation for EQ Class A biosolids.

Commenter: Martin, Steve and Popie, representing Citizens

DEQ has indicated that it has had to defer to the permittee for the accuracy of information contained in the application because DEQ has insufficient staff and funds to adequately insure the accuracy of the data. Finally additional research regarding sludge is clearly needed and can only be undertaken through adequate funding. The lack of oversight, failures to uncover application inaccuracies and lack of research can only be corrected by charging sufficient funds for the applications to meet the needs of DEQ.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

Additional research on sludge is needed. We need DEQ to increase the fees associated with permits for the land application of sewage sludge in order to pay for this additional research.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed regulations impose an additional \$1,000 annual permit maintenance fee, on top to the current VPDES permit maintenance fee, for major municipals for land application of biosolids or land disposal of sewage sludge if the activity has occurred in the 12 months preceding the maintenance fee due date. This additional permit maintenance fee should be eliminated because it lacks statutory authority. VAMWA generally has been very supportive of fees to be paid by permittees to fund DEQ's oversight program for the land application of biosolids. We are not opposing the additional \$1,000 fee proposed for major permit modifications due to changes relating to authorization for land application of biosolids in 9VAC24-20-120 A 1 or the \$5,000 fee for issuance of new permits to land apply biosolids in 9VAC25-20-110 A. Nevertheless, we do oppose the proposed requirement that VAMWA

members pay an additional \$1,000 permit maintenance fee for the authorization of land application or land disposal of biosolids, given the absence of any practical justifications (i.e., DEQ has provided no information on the need for additional staff time on an annual basis) or legal authority. Nowhere does the statute authorize an additional \$1,000 maintenance fee for the authorization of land application of biosolids or land disposal of sewage sludge. Virginia Code section 62.1-44.19:3 F, which sets forth permit fees for land application of sewage sludge, provides, "The fee for the initial issuance of a permit shall be \$5,000. The fee for the reissuance, amendment, or modification of a permit for an existing site shall not exceed \$1,000 and shall be charged only for permit actions initiated by the permit holder." It does not provide for a \$1,000 permit maintenance fee. Given the lack of a statutory basis for the \$1,000 maintenance fee for the authorization of land application of biosolids or land disposal of sewage sludge, VAMWA requests that it be removed from 9VAC25-20-142 A 1.

Without limiting VAMWA's request that the proposed extra maintenance fee be eliminated altogether, the maintenance fee should, at the very least, be reduced to \$500, which is the permit maintenance fee proposed for VPA Municipal Biosolids Operation. If DEQ can manage an existing VPA permit for \$500, it should also be able to manage an existing VPDES permit for the same \$500. Permit maintenance should not be more costly under a VPDES permit than a VPA permit.

DEQ Response to Comments: Fees

DEQ recognizes the commenters' concerns regarding fees, and in response, DEQ adjusted the requirements to align as closely as possible with the statutory requirements in §§ [62.1-44.19:3.F.](#) and [62.1-44.15:6.](#) of the Code of Virginia. For VPDES permits, the initial permit fee will include an additional \$5000 for processing of the biosolids portion of the permit. Annual maintenance fees will not increase over that prescribed in [62.1-44.15:6.](#) Any addition of land will be subject to a \$1000 modification fee, whether added during the term of the permit or at reissuance. This includes additions of less than 50% of the originally permitted acreage.

For VPA permits, the initial permit fee remains at \$5000 for a 10 year term. Annual maintenance fees will be reduced to \$100 per year (\$1000 maximum reissuance fee prescribed in § [62.1-44.19:3.F.](#) divided by permit term of 10 years). Any addition of land will be subject to a \$1000 modification fee, whether added during the term of the permit or at reissuance. This includes additions of less than 50% of the originally permitted acreage, due to the time required to review site data and provide the required notifications.

Biosolids application tonnage fees have not changed from those prescribed in the proposed regulation. Land application of Class B biosolids will incur a fee of \$7.50 per dry ton and exceptional quality biosolids are exempt from a fee.

Subject: [Financial Assurance](#)

Commenter: Barauskas III, Joseph P., representing Insurance Providers

I. The proposed endorsement form may present practical problems for the applicators. Insuring Companies are resistant to use forms other than their own or those that are available from the Insurance Services Office (ISO). II. The proposed endorsement appears to limit the applicators to a reimbursement method of claims payment. III, The Proposed Endorsement requiring First Party Clean Up and Defense Costs Outside the Limits of Liability may be restrictive in the Applicators ability to select an insurer and may also place a substantial financial burden on the Applicators. IV. The proposed Endorsement requires that there be a statement of each application site (providing Permit Number, name and DEQ Control Number). This may create an information management problem. I suggest that the Proposed Regulations be amended to allow for the use of one of the two forms; ISO Form CG 25 04 03 97 Designated Location(s) General Aggregate Limit or ISO Form CG 25 03 03 97 Designated Construction Project(s) General Aggregate Limit.

The Applicator represents the key point for the disposal of the biosolids material. However, the protection of the Commonwealth as well as the local municipalities and the general public cannot be overridden. Needs of all parties concerned may be met with a modification to the requirements for those Applicators seeking to purchase insurance. The Authority would benefit by: 1) Having an explicit or specific policy in place to pay claims (Addition to a Pollution Policy); 2) Limiting the cost associated with information management (Use if the CG 25 04 03 97 or CG 25 03 03 97 or their equivalent); 3) Allowing for Applicator flexibility in meeting the insurance requirements (Deletion of the BLE and Certificate allowing Applicators greater insuring and premium options); 4) Expanding the requirements regarding the insuring company (More defined criteria that will eliminate those insurance companies that may be in financial difficulties, which may impact their ability to pay for claims.) Applicators would benefit by: 1) Deletion of the BLE and its requirements (Reduction in possible financial constraints and greater flexibility in meeting the insurance requirements); 2) Deletion of the "internal" Certificate of Insurance for the ACORD Certificate of Insurance (Allows Applicators greater flexibility to meeting the requirements); 3) Limiting the cost associated with information management (Use of the CG 25 04 03 97 or CG 25 03 03 97 or their equivalents). The general public will benefit by having clearly defined and easily complied with standard for "The Transport, Storage and Application of Biosolids".

The Certificate of Liability Insurance provided by the Proposed Requirements will create similar difficulties to those outlined in the Biosolids Liability Endorsement. Therefore, for those Applicators utilizing insurance, the Certificate of Liability Insurance be replaced by the ACORD Certificate of Insurance.

The proposed regulations include two specific methods to comply with the Liability Insurance requirements; self insurance or the purchase of insurance on the open market. The process for the Applicator opting for self insurance is fairly clear within the proposed regulations. However, the process for Applicators seeking to purchase insurance on the open market is not sufficiently clear, in my estimation.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Sections 9VAC25-32-770 et seq. include requirements for liability insurance and financial tests for liability coverage. Section 9VAC25-32-790 requires that insurance policies include a

"Biosolids Liability Endorsement". This term is not defined. Moreover, based on inquiries within the insurance industry, such endorsements do not exist. Instead, a certificate of liability insurance that includes a pollution endorsement that explicitly recognizes that the actions covered liability relating to the storage, hauling or application of biosolids should be sufficient.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed regulations include an entirely new article (Article 6) to address financial assurance. The language would require that a permit holder or applicant demonstrate that it will be financially responsible (as evidenced by liability coverage of \$2 million per occurrence or an aggregate of \$2 million) for clean-up costs, personal or bodily injury, and property damage that results from the transport, storage, or land application of biosolids. Local governments (defined to include cities, towns, counties, or authorities, commissions, or districts created by these entities) would be permitted to demonstrate financial assurance either by using a test laid out in the proposed regulations or by providing a local guarantee. The TAC discussed financial assurance issues at length in 2009 and created a subcommittee to work on this important issue. One of the suggestions made by the VAMWA representative on the subcommittee was to streamline the local government test using alternative regulatory language. VAMWA's suggested alternative regulatory language would allow local government permit holders or applicants to submit a letter signed by the local government's chief financial officer or a notarized statement from the utility director, executive director, or manager, stating that the permit holder or applicant is able to show financial responsibility because of the ability to set sewer rates for use of the sewerage system. VAMWA requests that DEQ substitute this language for the proposed language in 9VAC25-32-820.

Commenter: Trumbo, Susan, representing Recyc Systems

We have requested our insurance agents to review and comment on the Financial Assurance Section as they are the expert on this topic. We urge the Department to take into consideration the already limited number of providers who provide this type of coverage. We have concern that the insurance providers will find the requirements a burden or even too much of a nuisance and chose not to provide the required coverage. We note that the State Insurance Agency has in place standards for providers, endorsements and proof of insurance which should be sufficient for the biosolids use regulations. We wholly support the need for permit holders to provide adequate financial insurance but the requirements should not be prohibitive to implementation of the program.

Commenter: Turpin, Richard B., representing Citizens

Spreader shall give the farmer a bond/insurance that will pay if any future cleanup is needed. This is to prevent taxpayers from having to pay for a cleanup after the spreaders are gone.

DEQ Response to Comments: Financial Assurance

The Department received public comment regarding the adequacy of the financial assurance procedures. In response to comment, a statement has been added clarifying that for financial assurance demonstrated through liability insurance, a pollution policy as well as a general

liability policy is required that covers storage, transport, and land application of biosolids. Additionally, a measure of the financial stability of the insurance carrier is required in the proposed final regulation in that the carrier must meet specified AM Best, Standard & Poor, or Moody ratings. Additional comments regarding suggestions for the types of certifying documents required to demonstrate appropriate coverage was reviewed by DEQ staff that regularly review financial assurance submittals, and additional changes were not recommended.

Comments were also received requesting that local government entities land applying biosolids under a VPDES permit be exempt from the requirements to demonstrate financial assurance. The Code of Virginia explicitly mandates that all permit holders authorized to land apply biosolids must demonstrate financial assurance, and the procedures prescribed in the regulation are consistent with other Department programs.

Subject: [Health Concerns](#)

Commenter: Burleigh, Anne W, representing Self

No one knows what effect sludge will have on people with health problems living close to sludged property. Because of this I would hope no one would use sludge not knowing what is in it. We live very close to property that Mr. G.D. Gilliam has sludged. My husband has pulmonary fibrosis. I have had a heart valve replacement and also have asthma. It is time for the government to look out for the citizens of this state and not to cater to the large corporations. How did central Virginia become the dumping grounds for sludge.? No area should have to smell this sludge and breath it in.

Commenter: Davis, Brandon P., representing Shenandoah County

Identification and protection of health sensitive individuals: In order to ensure that health and quality of life are protected as set forth in the Code, DEQ should ensure adequate identification of health sensitive individuals in the vicinity of application sites, or consider everyone in the vicinity of land application sites as health sensitive; and , if health sensitive individuals are identified, DEQ should address both individuals with preexisting health conditions and individuals whose health is adversely affected following exposure to sewage sludge.

Commenter: Dunkley, Barry T., representing City of Danville

With over 30 years of intense research on land application of biosolids there has been no established link between health effects and biosolids. Industrial pretreatment measures are designed to address any issues that may be raised in regard to toxic and heavy metal concentrations. Industrial pollutants have been steadily declining due to improvements in treatment technologies.

Commenter: Fowler, Jason, representing Self

I am a concerned citizen in the Lynchburg/Bedford area who has been studying the municipal sewage management industry's mishandling and potential conflicts of interest

surrounding the issue of sludge (aka: biosolids_ over many years. There are many concerned citizens both in the state of Virginia and nationally who have tirelessly sought to uncover the injustice and possible corruption that has lead us to the place we are in today--busily spreading biosolids that have been minimally tested. I am concerned that there are those within the Virginia state government (and beyond) who have been turning a blind eye to this ongoing public health concern - a situation that while benefiting the sewage industry (and well meaning farmers who are looking for fertilizer options in these hard times) is compounding irreversible environmental and human health damage that will persist for generations and in many cases is negatively impacting and at times ending lives today. If we are truly a commonwealth should we not act to safeguard our "common wealth"? Instead we are diminishing the vitality of our land, our bodies and the rights of all Virginia communities to stand against the lop-sided science that is being leveraged by an industry that has trumped our ability to govern ourselves democratically. You have heard many Virginia voices crying out to have an influence on how our communities handle this issue and you will continue to hear more and more voices emerging who oppose the land application of biosolids in Region 2000 and Virginia (and the entire nation) until it is forever stopped--until the corruption allowing it to continue is uncovered-- and until it is publicly acknowledged that the incomplete and outdated science on which sludge application is deemed safe can no longer be used to gamble with the future of Virginia's people, land and resources.

Commenter: Gessner, Mary, representing Friends of the North Fork of the Shenandoah River

I would like to echo the same frustrations voiced by previous speakers (Hughes and Atwood) about the seeming lack of response to the Shenandoah permit concerns. The new regulations do not provide any of the requested or needed changes. I am concerned that the current mode of operation is in the absence of definitive, specific information indicating that this material is harmful to the environment or human health, the assumption being made is that they are safe. This is a false assumption. These regulations are not protective of human health or the environment. To the extent that it is allowable under federal law and state Code that these regulations be as restrictive as possible, especially given the unknowns. DEQ appears to be reluctant to require more than the minimum requirements of state requirements. These regulations need to be tightened up and be made as protective as possible. Do not allow for staff discretion to do just the bare minimum.

Commenter: Gibson, Dave, representing Citizens

Sewage sludge originates from treatment of residential and commercial waste and should be distinguished from composted organic material and farm manure. Sewage treatment plants were designed to remove chemical and biological pollutants from the wastewater, not produce fertilizer. This is precisely why the Federal Clean Water Act defines sewage sludge as a pollutant. The risks inherent to sludge application to lands are chemical, biological and biochemical. Passing regulatory oversight of sewage sludge application on land to DEQ, an agency historically focused on chemical contaminants, is inappropriate given that most data indicate the risks from sludge are microbiological.

Commenter: Graf, Mary, representing Citizens

According to Dr. Alan Rubin, who was a main author of the EPA Part 503, health sensitive individuals were not considered as the regulations were formulated, which he admits was a

flaw. The DEQ regulations need to take that flaw into consideration if they are to protect human health as VA Code requires. The regulations must require identifying health sensitive individuals and make certain they are not exposed to sludge.

I feel disappointed, weary, frustrated, belittled, outraged by how often citizens have been invited to offer their input with regard to sewage sludge practices and how routinely our input is disregarded. The DEQ regulations being proposed do not adequately protect human health as is required by Virginia law.

Physicians need to be better informed regarding health risks and effects associated with land applying sewage sludge. Under the regulations and by VA Code, it is DEQ that is responsible for, and must take the lead, in protecting human health. When the Expert Panel was unable to establish a procedure or form for health-concerned citizens and their physicians to follow in order to have their issues addressed, the assignment was passed over to the TAC. They have not come up with anything. WERF has worked on the task, but haven't achieved consensus of its members. DEQ Regulations have not provided a physician/patient standard form that enables health issues to be addressed in order to protect human health. No workable procedure is in place to record human health complaints by categories such as health problems, site locations, time of year, weather conditions, source of sludge, etc. Such a tracking system would make it possible to verify a causal link between sewage sludge and illnesses, connect some dots, and hopefully avoid further complaints. Though this has been suggested before, the DEQ Regulations do not take a health-protective stance in making this effort to preempt health problems.

Regulations need to state who determines "unreasonable health risks", how the risks are weighed, how the public is notified when such a situation arises, and what regress the public has if they do not agree with the assessment.

Submitted various pieces of correspondence related to comments, complaints and requirements offered to DEQ over the past several years for the record.

Commenter: Graf, Mary, representing Self

321/8 mentions "nuisance and health problems". How are these problems brought to the attention of DEQ? How is nuisance determined or evaluated? Are there specified guidelines? And who makes the determination?

DEQ has addressed this issue in the buffer guidance.

Commenter: Hart, George and Sharon, representing Citizens

There is inadequate research and knowledge, oversight inspections, and endangerment to public health of applying sewage sludge to our farm lands. Even though it has gone through a certain treatment process, that process used by sewage treatment plants does not, and never was intended to kill all pathogens and bacteria in sludge. I strongly oppose DEQ permitting land application of sludge.

Commenter: Lorien, Joy, representing Citizens

Myth: Sludge has never impacted people, livestock, or groundwater. Fact: False. Hundreds

of sludge-exposed rural people have reported serious respiratory and gastrointestinal illnesses. In Greenland NH, dozens of neighbors got seriously ill, and one young man died, after 610 tons of sludge were chain dragged on a ten acre hayfield located next to their houses. Cattle have been killed by ingesting forage, grown on sludged fields. New Hampshire and Maine drinking water sources have been impacted. Industry lobbying groups, such as NEBRA, are covering up these reported and documented incidents.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

I include a sampling of over 732 scientific studies (many peer reviewed) from the National Institutes of Health, a federal government agency whose mission it is to compile and conduct research on all things health pertaining to humans.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Although we recognize the need to dispose of treated sewage sludge and that land application may be appropriate under some circumstances, we are concerned that the proposed regulations do not adequately protect the environment and natural resources of the Commonwealth. Specifically, the revised regulations do not adequately address (1) the largely unknown content of the sludge, (2) application to geologically vulnerable sites, and (3) insufficient permit requirements to ensure the protection of the environment or human health.

There is no provision in the state constitution that requires the state to provide easy disposal of sewage sludge or that entitles farmers and others to receive free fertilizer. However, Article XI, Sec. 1 of the Constitution of the State of Virginia establishes that it is "the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment or destruction,..." Pursuant to that, Virginia State Code Section 62.1-44.19:3.B requires that the State Water Control Board "...adopt regulations to ensure that...1) land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment; and iii) the escape, flow or discharge of sewage sludge into state waters, in a manner that would cause pollution of state waters...shall be prevented." As was concluded by the Panel of Experts and reinforced by the EPA study of sewage sludge, much additional information is needed to ensure protection of health and the environment. DEQ and the State Water Control Board should use all the flexibility they have available to them under federal and state law to regulate the use of biosolids within the Commonwealth in a manner that actually ensures those protections.

Commenter: Overbey, Jo, representing Citizens

Under § 62.1-44.19:3 B, the Board is prohibited from issuing a valid permit to land apply sewage sludge unless the permit terms and conditions ensure that health is protected when sewage sludge is land applied. Citizens have attempted unsuccessfully to convince DEQ to at least ensure that health sensitive individuals are not exposed to sewage sludge contaminants. In order for the Board to issue a valid permit, it is imperative that DEQ comply with its statutory mandate to ensure that those individuals are protected. Unfortunately, DEQ has made quite clear that it does not want this responsibility because it does not have the expertise to identify health sensitive individuals who should not be exposed, or even the ability to determine

adequate buffers or other requirements to ensure that these individuals are not exposed. Instead, DEQ purports to have unloaded this responsibility on the Virginia Department of Health. However, the responsibility was taken from VDH and made the responsibility of DEQ. Indeed, the VDH has rebuffed DEQ's efforts to saddle that Department with DEQ's statutory responsibility. During the TAC, VDH did make one recommendation--that DEQ at least provide for a 400 foot buffer. DEQ has declined to do so. Instead, DEQ is prepared only to extend 400 ft buffers from dwellings to those that ask, without making any effort to make certain that health sensitive individuals are even aware of such right.

VDH has agreed to entertain health complaints, but made clear that it would provide no assistance to anyone who might need additional buffers, with the possible exception of someone whose heart was hanging outside their body--even though VDH established buffers of over a mile in some cases when it was responsible for protecting health. DEQ has not only failed to address health issues, but its portrayal of relief through VDH is little more than a cruel joke upon those who might think they are being protected. Until DEQ accepts its responsibility to ensure that health is protected and includes provisions in permits that actually comply with that statutory mandate; it is submitted that the Board is not in a position to issue a valid permit to anyone.

Commenter: Parker, Diana, representing Citizens

I have studied the results of the General Assembly HJR 694 through Expert Panel House Document 27--2008 and JLARC Document 89--2005 on Review of Land Application of Biosolids in Virginia relevant to subject changes and the EPA 503 Rule. Neither the Panel, EPA nor DEQ has gone far enough for protection of citizen health and the environment. The General Assembly did not fund the Panel for studies or analyses. Expert members of the Panel could only produce for others in the group available scientific documentation.

Commenter: Purdum, K. Leigh, representing Madison County Residents

I live on Rt. 609, (Spring Branch Road) in Brightwood (Madison County) on the same road where Mr. Utz and others have applied sludge to their fields in past years. I would like to take the opportunity to express my disapproval of the application of sludge for the following reasons: For a period of one week to one month (depending on the weather conditions existing at the time of application or within the weeks following application): 1) my household cannot open windows either on our house or our cars due to the horrific odor emanating from the fields; 2) members of my household experience respiratory difficulties which, in the past, have led to doctor visits and other out-of-pocket expenses; 3) members of my household are not able to enjoy any outdoor activities even on our own property due to the obnoxious odor and the health side-effects. I encourage you to take into consideration these facts before you allow the application of sludge to fields within close proximity of neighboring residential homes. Your consideration in denying these permits when the application is within a 1 mile radius of a residential home (other than the applicants) is appreciated.

Commenter: Raine, Nancy V., representing Citizens

I learned that treated sewage sludge was going down on both sides of my deeded right of way which is nearly half a mile in length and the sole access to my farm. I contact the Health Director to convey my history of health problems associated with intense and prolonged

exposure to sewage sludge. I was informed that the "buffer" for my driveway was only 10 feet. With my history of illness, I hoped that this buffer could be extended to at least 200 feet or application along this route could be suspended altogether. I expected operations to be delayed until the Health Director (Dr. Gateley) had time to review my medical records and meeting with me and my doctor and perhaps even conduct a site visit. He did not have the authority to request a delay of any kind nor did DEQ have such authority. Furthermore, because there is no regulation regarding right-of-way buffers, the decision on that point had to be left to the haulers. As a courtesy to us, DEQ did ask the haulers for a more generous buffer along the right-of-way. The haulers would not grant one. The treated sewage sludge went down with only a 10 foot buffer along the entire length of the driveway on both sides. I again experienced symptoms of illness. After months of effort, my doctor, husband and I were finally able to meet with Dr. Gateley, seven months after I actually requested his intervention. At the meeting my doctor confirmed the illnesses I experienced coincident with application and expressed concern about the frequency of exposure along the driveway. Dr. Gateley, a physician, was in a difficult position. He made it clear that he was unable to do anything because no causation between my illness and exposure could be established because we did not know what I might have been exposed to. He also did not have the authority to extend the buffer anymore than DEQ had the authority to do so. His role was in essence to enforce the regulations, just as DEQ's role is to enforce regulations. In the end, after seven months and hours and hours of work, my health concerns were left to the industry. My husband and I were informed that we can expect application along this route annually for many years to come. I have had brain surgery, I am recovering from a tracheotomy, a feeding tube and a wound in the back of my head that required 31 stitches. I only recently completed a course of steroids. No one knows what causes the type of tumor I had, but exposure to toxins has been linked to it. I cannot prove the ordeal that I have had is due to prolonged and intensive exposure to stored sewage sludge from the pit and along my driveway, but I can't disprove it either. The burden ends up being mine, as does the dread of continued exposure without any hope of relief. I knew that it would be inhumane to subject me to foul odors and unknown toxins and pathogens when I returned from the hospital, especially because I may need radiation for lingering issues. I worried that the nurses and therapists who regularly treat me at home and the home health aides I need might not be willing to be exposed along the road and in the other areas around my home if the sludge went down again this year. I also knew that there is nothing anyone could do to address my health concerns.

No attempt is made to identify people who have pre-existing conditions that would make them sensitive or who may be suffering from a serious medical issue. No matter how intricate the labyrinth of regulations, they do not make land application of sewage sludge safe for human health or the environment. They do not give the Board or anyone else any power to protect human health, even if someone wanted to act in a responsible way toward individual citizens.

On a policy level, I do hope that VDH might work with DEQ to create effective mechanisms for citizen's medical issues to be professionally and respectfully reviewed and for physicians conducting that review to be given the authority to be able to act in whatever way is deemed protective of a citizen's individual health problem. This should include being able to pull a permit or modify a permit, even on the broad basis of precautionary steps to protect human health. The human concerns are there, but the system to respond to them does not

appear to be.

Submitted correspondence with Health Department and DEQ related to personal health concerns and issues

There is no scientific documentation that establishes that the "buffers" set forth in the regulations are protective of human health because what it is protective of is unknown. Only testing of each load before it is land applied would provide a basis for establishing setbacks that would be protective in specific cases. Because such testing is impractical and expensive and would interfere with the industry being able to conduct its business, no one will ever know precisely what an individual is exposed to when sludge goes down. Thus, no matter how ill a person may become coincident with exposure, the cause of the illness will never be tied to exposure. By default and definition, therefore, exposure is called "safe". The talk of buffers appears to be window dressing for health concerns that by definition cannot be caused by exposure to "biosolids".

There is no workable procedure for individual health problems to be reviewed and that no authority has been granted to VDH physicians to address individual health concerns by extension of buffers or any other means of protection. I find it ironic that the General Assembly transferred this program from VDH to DEQ in 2007 because of VDH's dismal performance in protecting health. Now the regulations are such that even if a VDH physician wanted to protect an individual, he or she does not appear to have the authority to do so. DEQ has stated that it is VDH who works directly with citizens with health concerns and that VDH would advise DEQ as to what action to take. VDH has confirmed this. Yet, VDH cannot produce timely review of individual health issues nor any documentation that established buffers are protective of human health in all instances.

These regulations are written in order to render everyone powerless to do anything to address protective measures for human health and the environment. The reason is because measures that actually protect people's health do not benefit industry's bottom line and causes it bother of one sort or another. It is impossible to know what is being applied and what impact it could have on human health. I don't need to remind any of you that unlike pesticides, sewage sludge is a complex, variable and concentrated mixture of a multiple of unstudied and unregulated hazardous wastes dumped into the sewer systems. These regulations are designed to frustrate the ability for caring and professional physicians to meet their charter to protect human health. They are written to limit everyone's ability to act in a responsible way toward citizens such as myself. The talk about buffers is window dressing to make it appear that these regulations actually address health concerns. Health is a hot potato no wants to touch - DEQ has tossed it to VDH once again and VDH once again has no idea what to do with health concerns. The proposed amendments do nothing to resolve this issue. Until these deficiencies are corrected in the regulations, there cannot be a valid permit issued in the Commonwealth of Virginia.

Commenter: Rowe, Mack, representing Madison County Residents

The land application of sludge is potentially dangerous to the health of people living nearby or it can certainly impair human health. It is unpredictable in its content and does not allow the

farmer intelligent application of nutrients for specific crops. It is a terrible idea and is designed solely for the profit of the purveyors.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

We recommend that the SWCB and DEQ staff review the scientific research that was submitted to the Expert Panel on Biosolids and upon which the Panel based its determination that it had "uncovered no evidence or literature verifying a causal link between biosolids and illness." We also ask that reference be made to the Council's letter reviewing available scientific research on biosolids and health.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Buffer waiver provisions that clearly fail to ensure that health is protected must be either eliminated or modified. The draft regulations fail to include important restrictions required to ensure that Health is protected. The proposed buffer waiver provisions specifically allow Permit Holders to land apply in situations where it has been determined that health would not be protected. It is not clear if there are any circumstances where waiver of the dwelling buffer would not endanger health. If there are and DEQ elects to allow such waivers, there must be clear limiting language such as: "DEQ may issue buffer waivers in writing upon receipt of written informed waivers by all those who may be adversely impacted by the waiver, together with sufficient documentation to demonstrate that such waiver will not adversely affect the environment or the health, safety or welfare of those in the vicinity of the specific proposed application site."

Code § 62.1-44-19:3 prohibits all land application of sewage sludge "without permit, ordinances, notice requirements, fees." Code § 62.1-44-19:3 A makes clear that a DEQ permit that meets Code requirements is a prerequisite. That same section sets forth a threshold precondition to "consideration" of a permit by the SWCB "unless it includes the landowner's written consent to apply sewage sludge on his property." The Code also sets forth a number of specific preconditions to the issuance of valid permits. One of the most important preconditions is set forth in Code § 62.1-44.19:3 B: "(ii) land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment..." Code § 62.1-44.19:3 O requires that the Board "develop regulations specifying and providing for extended buffers to be employed for applications of sewage sludge" as a precondition to allowing unincorporated land applications of sewage sludge. These provisions preclude land application of sewage sludge if "for any reason" the permit fails to include provisions needed to ensure that those requirements are met. From time to time VDH argued that it did not have authority to impose additional requirements needed to comply with the Code. Thus the Code was amended to provide the option to impose additional requirements, including extended buffers under certain circumstances as an alternative to denying permits. VDH ultimately chose to disregard Code requirements and issued permits that did not meet one or more of the preconditions required by the Code, and allowed land application under those permits that were not valid. Following the transfer to DEQ, DEQ chose to disregard those same Code requirements and reissued new permits. The persistent failure to include sufficient permit conditions to meet requirements set forth in the Code of Virginia is not a minor technicality that can be ignored. The draft regulations fail to address the inability of the SWCB to issue permits that would allow land application of sewage sludge to occur lawfully in the Commonwealth. If

there are to be land application permits that allow lawful land applications, the draft regulations must be substantially rewritten.

DEQ Failed to utilize its staff and its Technical Advisory Committee to draft regulations that complied with the requirements of the Code of Virginia. At no time during the TAC meetings did DEQ staff identify or offer changes needed to bring the regulations in compliance with the Code. Members of the public had long complained that VDH had failed to comply with its mandate to protect health when it was empowered to issue land application permits. The General Assembly addressed this failure by transferring VDH's former mandate to ensure that the protection of health be ensured when sewage sludge was land-applied to DEQ. VDH was simply charged by the General Assembly to assist DEQ as it ensured that health was protected. In its advisory capacity, VDH recommended to the TAC that all buffers be increased to 400 ft., but was unable to provide documentation that 400 feet would be sufficient to protect all health sensitive individuals. Yet, DEQ chose to ignore this inadequate recommendation when it prepared the draft regulations. VDH also agreed that if less than 400 ft was provide for, Regional Health Directors would evaluate specific health concerns and from time to time "recommend" 400 ft buffers from dwellings. Yet the draft regulations failed to include even the unsupported and inadequate buffers recommended by VDH. During the TAC meetings DEQ made clear that it had no expertise in addressing health issues and did not intend to acquire such expertise. Instead, DEQ took the position that it would rely on VDH's failed policies and practices when it came to protecting health. DEQ must look at other sources to establish sufficient buffers to ensure that health is protected. Currently, the proposed changes combined with the existing regulations that have at times a flawed and at times non-existent basis for the protection of human health. As such, the draft regulations simply ignore this important Code requirement.

For the SWCB to comply with its Code mandate, health sensitive individuals must first be identified before they can be protected. The draft regulations together with DEQ policies and practices provide no expectation that such individuals will be adequately identified. It was for that reason that VDH recommended to DEQ that it establish buffers as though health sensitive individuals were present. Thus the regulation must state: "Until DEQ develops adequate regulations to ensure that health sensitive individuals in the vicinity of land application sites have been identified prior to any land application; DEQ shall require buffers based on the assumption that the most health sensitive are present unless DEQ documents that no health sensitive individual could be in the vicinity of proposed sites at the time of land application." This, in turn, requires a clear directive to Permit Holders that unless it is documented that no health sensitive individuals are present near application sites, extended buffers are required before any specific land applications can be made: "Permit Holders shall not apply sewage sludge on any sites in issued permits unless prior to land application the Permit Holder provided to DEQ documentation in advance of each application that no health sensitive individuals are in the vicinity of the proposed application site who could be exposed to sewage sludge constituents."

It is important that the Permit Applicant or Permit Holder certify that the extent to which they made landowners aware of the risks associated with land-applied sludge is fully set forth in this agreement; and that they had no information to suggest a greater risk. That would be

accomplished by the following certification requirement: "Permit Applicant or Permit Holder shall certify that it has made full disclosure of the risks of accepting land-applied sewage sludge. If Applicant or Permit Holder has provided disclosure or representations in addition to those set forth in Landowners certification, they shall be listed in the Written Consent certification document."

Landowners are subject to other laws when they agree to accept land-applied sewage sludge, including taking reasonable steps to avoid harming health and the environment. They must be aware of this if they are to provide informed consent. That could be accomplished by having the following certification requirement: "Health Sensitive Individuals are at a special risk when exposed to land-applied sewage sludge. Landowners have obligations under other laws to use due diligence to identify such individuals in the vicinity of land application sites and to make their presence known to DEQ and the Permit Holder prior to any land application. Landowners shall certify that they have and will continue to do so."

Permit Applicants and Permit Holders are subject to other laws when they agree to accept land-applied sewage sludge, including taking responsible steps to avoid harming health and the environment. It is imperative Permit Holders be reminded of this: "Health Sensitive Individuals are most at risk when exposed to land-applied sewage sludge. Permit Holders have obligations under other laws to use due diligence to identify such individuals in the vicinity of land application sites and to make their presence known to DEQ and the Permit Holder prior to any land application. Permit Holder shall certify that they will do so."

Recognizing that any given sewage sludge could contain many different constituents and having elected not to determine what is in any given sewage sludge that is land-applied, DEQ must ensure that those most at risk are not exposed. DEQ's first task is to identify preexisting medical conditions that would identify individuals who should not be exposed. VDH identified the following medical conditions to be reflected in the regulations: "Respiratory diseases include Asthma (must require bronchodilator therapy); Chronic obstructive pulmonary disease; Emphysema and Cystic fibrosis. Immunodeficiency and immunosuppressant conditions; including Chemotherapy, for two weeks before starting a course of chemotherapy and for one month after completing a course of chemotherapy, or with an absolute neutrophil count less than 1000/mm³; Organ transplant recipient, for 4 months after transplantation; HIV infected with CD4 count below 200; Primary immunodeficiency, exclusions will vary depending upon the diagnosis." However it is DEQ's responsibility to ensure that the list is complete. This list needs to be supplemented by medical professionals. The regulations must include the following requirement: "If any medical professional recommends that additional medical conditions be added to the list, DEQ shall include such additional medical conditions unless DEQ documents that the health of individuals with such medical conditions would be protected if exposed to the sewage sludge constituents that may be present in sewage sludge."

The regulations must ensure that Health Sensitive Individuals are not exposed. From the perspective of many citizens who live in the vicinity of land application sites, protection of health and quality of life is of paramount concern when sewage sludge is land-applied - especially health sensitive individuals whose health and quality of life are at even greater risk. Indeed, the Expert Panel agreed that addressing the questions surrounding citizen-reported

health symptoms should be its highest priority. No reference could be found in the draft regulations directing Permit Holders to ensure that health is protected when sewage sludge is land-applied under the permit. The only effort to comply with Code §§ 62.1-44.19:3A and 62.1-44.19:30 has been to establish buffers that simply assume that the public would not be exposed. However, to ensure that health sensitive individuals are protected, the regulation must ensure that such individuals are not exposed to the many constituents that may be in sewage sludge in amounts or combinations that may be detrimental to human health. The proposed regulations make no meaningful effort to do so. Indeed, there was no reference to documentation supporting the adequacy of proposed buffers to preclude exposure to even health sensitive individuals.

The ultimate list, no matter how comprehensive, may not cover all health sensitive individuals or be sufficient to identify health sensitive individuals in advance of land applications, including individuals who were not aware that they had such medical condition and/or did not communicate those medical conditions to DEQ in advance of any land application. DEQ must include individuals whose health has been adversely affected by exposure to land-applied sewage sludge. Ultimately, this is a medical issue for which medical doctors, especially Doctors treating specific patients, are ultimately qualified to recommend that their patients not be exposed to the many potentially harmful constituents in sewage sludge. The following provisions must be included in the regulations: "Whenever a medical doctor concludes that an individual not be exposed to treated sewage sludge, DEQ shall ensure that such individual(s) are not exposed unless DEQ documents that the health of such individual(s) would be protected if exposed." DEQ must provide for a clear investigative process that will result in identification of all health sensitive individuals, with special focus on the preclusion of re-exposure where illnesses are the likely result of having been exposed to sewage sludge and must be proactive to ensure that such health sensitive individuals are not re-exposed to sewage sludge. The draft regulations not only fail to do this; they also don't even provide adequate notice to those living in the vicinity of applications sites. It is ultimately the responsibility of the Permit Holder to ensure that health sensitive individuals are identified and excluded from exposure to sewage sludge constituents. The draft regulations ignore the Permit Holders' responsibility. Landowner certification requirements must be incorporated into the regulation if DEQ is to ensure that health sensitive individuals in the vicinity of land application sites are protected.

Commenter: Staudinger, Henry, representing Citizens

Land application of Sewage Sludge is the preferred method of many sludge generators for the disposal of this Solid Waste. However, because of concerns to health and the environment, land application of sewage sludge in Virginia is prohibited by statute, except under valid permits issued by the SWCB that comply with a number of important statutory preconditions. These preconditions include the adoption of regulations that ensure, among other things, that health and the environment are protected. VA Attorney General Cuccinelli, II, in an opinion dated October 29, 2010 summarized the applicable law as follows: "It is my opinion that any permit issued by the Board for land application of sewage sludge must be in compliance with the applicable requirements of § 62.1-44.19:3." The Attorney General went on to say that the Board is an agency created by statute in the Executive Department of the Commonwealth, and concluded: "It is elementary that 'administrative agencies, in the exercise of their powers, may

validly act only within the authority conferred upon them by statutes vesting power in them,' Thus, it follows without question that the Board must act in compliance with its authorizing statute, in this case § 62.1-44.19:3." I submit that it is unlikely that there has ever been a land application permit issued that complies with the Code of Virginia. For example, statutory preconditions are not met, applications on Pollution Sensitive Sites are allowed, and Health Sensitive Individuals are not protected. This amendment process offers the SWCB the opportunity to issue the requisite regulations as well as to ensure DEQ policies and practices that comply with Code requirements. The draft regulations prepared by DEQ do not accomplish that objective, virtually ensuring that the Board will not be able to issue permits that would authorize lawful land applications. I ask the Board to carefully evaluate and consider the Code mandated preconditions and other specific requirements before land application can be lawful under DEQ permits.

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems employs a staff of equipment operators, truck drivers and field technicians who have regular exposure to biosolids. Some have been working with biosolids in excess of twenty years. In addition, we have farms where biosolids have been applied to their fields on an infrequent basis over the past twenty years. Those who work the fields have exposure to the biosolids which are applied to the fields. We have no knowledge of anyone, staff or farmers, becoming ill from their exposure to biosolids.

DEQ Response to Comments: Health Concerns

As required by § 62.1-44.19:3, DEQ submits each application for land application of biosolids to the Virginia Department of Health for their recommendations, if any, on permit modifications needed to protect public health. DEQ does not have access to, and does not ask for, individual's health information and therefore relies on the public to provide pertinent information during the comment periods for land application permits. Staff consults with the Department of Health (VDH) for recommendations based on the information provided. In its 2008 Report to the Governor and the General Assembly (House Document No. 27), the Governor's Expert Panel on Biosolids stated the following:

In early discussions, the Panel agreed that addressing the questions surrounding citizen-reported health symptoms should be its highest priority. In the past 18 months, the Panel uncovered no evidence or literature verifying a causal link between biosolids and illness, recognizing current gaps in the science and knowledge surrounding this issue. These gaps could be reduced through highly controlled epidemiological studies relating to health effects of land applied biosolids, and additional efforts to reduce the limitations in quantifying all the chemical and biological constituents in biosolids. While the current scientific evidence does not establish a specific chemical or biological agent cause-effect link between citizen health complaints and the land application of biosolids, the Panel does recognize that some individuals residing in close proximity to biosolids land application sites have reported varied adverse health impacts.

Additional information pertaining to the expert panel and the final report can be accessed at <http://www.deq.virginia.gov/info/biosolidspanel.html>. The panel determined that “as long as biosolids are applied in conformance with all state and federal law and regulations, there is no scientific evidence of any toxic effect to soil organisms, plants grown in treated soils, or to humans (via acute effects or bio-accumulation pathways) from inorganic trace elements (including heavy metals) found at the current concentrations in biosolids.”

Subject: [Hours of Operation](#)

Commenter: Elliott, Judy, representing Citizens

The applicators are spreading sludge in the early morning on some sites. Are there any DEQ staff or any County Monitors there on the site during those early morning applications?

Commenter: Foster, Ed, representing Citizens

Hours when spreading is allowed: Should be 8 AM to 6 PM. It is ridiculous to have noisy trucks disrupting neighborhoods at 3 AM.

Commenter: Graf, Mary, representing Citizens

Hours of operation must be limited to regular business hours so that DEQ and county monitors will be available to do their jobs. Spreading at 3 and 4 am while monitors are still home in bed is not a procedure that will ensure regulation compliance.

There need to be time-of-day restrictions: business hours only so that DEQ and county monitors will be available to do their jobs.

Commenter: Graf, Mary, representing Self

I tried to find a regulation that covers the hours of the day when applications are allowed. Is there any time of day restriction? If so, could you direct me by page/line of the draft that you sent earlier.

There are no time of day restrictions in the statute or regulation.

Commenter: Layne, Bill, representing Citizens

I observed some of this sludge being spread early in the morning before daylight while your inspectors were still asleep. All of this does not inspire a lot of confidence in your agency.

DEQ Response to Comments: Hours of Operation

DEQ does not regulate the hours of business; however, permit requirements for proper application must be met regardless of when the application occurs. The VPA regulation states that if “necessary to protect the environment or the health, safety or welfare of persons residing in the vicinity of a proposed land application site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding ...time of day restrictions.” VDH has not advised DEQ of any need to restrict biosolids land application times to protect human health or welfare. Should a citizen assert that a particular site-specific condition should warrant

such a condition, DEQ would consult with VDH in the evaluation of the affect on health, safety or welfare.

It should be noted that transport of biosolids to an application site is typically the only activity that occurs in the pre-dawn hours. The daily notice requirement, required to be submitted no more than 24 hours prior to commencement of biosolids activities (including delivery) at a site is included in the regulation as a means to have inspectors able to arrive at a site at the start of their work day, rather than arrive in the office and await notification of where land application activity is occurring.

Subject: [Landowner Agreements](#)

Commenter: Burleigh, Mary Ann, representing Citizens

Develop a method to verify that the landowner certification is made by the current property owner at the time of permit issuance application.

Commenter: Coulling, Philip, representing Rockbridge Area Conservation Council

Because even with the best science and efforts of the Department, many unknowns still exist about the health effects, persistence, and transport of some of the modern pharmaceuticals and other compounds EPA has now documented as widely occurring in sewage sludges, we also strongly recommend that the department require a permanent notice be recorded in the deeds of properties where land application has occurred so that future land owners will have proper notice of the activities that have occurred on the property.

Commenter: Davis, Brandon P., representing Shenandoah County

Landowner Certification Verification: Develop a method to verify that the landowner certification is made by the current property owner at the time of permit issuance application.

Commenter: Graf, Charles, representing Citizens

There must be some sort of registry to list all land that has had sewage sludge applied to it. This listing must be easily accessible to private citizens and to realtors. Buyers have a right to know if pollutants have been applied to the land they are considering purchasing. This would be a solution to a problem that was poorly handled by the Water Control Board. The Water Control Board has the final responsibility of passing sludge permits, and at the same time of protecting citizens. At present, there is no way that a citizen buying land can know if it has been used as a toxic waste dump. The Board tried to pacify the citizens by amending the permit (Campbell County Permit) to require the permittee to notify future owners about the sludging. But this notification would occur only AFTER the purchase, which does not protect the buyer. Also, it is the permittee who is required to do the notifying, and the permittee has proven that they are unable to track even the current owners included in their permits. This action was an insult to the intelligence of the citizens, and a disappointment that the Board would stoop to such tactics.

Commenter: Graf, Mary, representing Citizens

According to VA Code, a permit cannot be valid if the landowner/farmer does not give signed consent. Does this not imply informed consent. DEQ and the Extension Service are assumed by the general public to be trusted, unbiased sources of information, and thus the landowner's most likely resources concerning sewage sludge application. But completely lacking in neutrality, DEQ and the Extension Service both present sewage sludge biosolids as free "fertilizer", when in reality biosolids are pollutants, as defined in the Federal Clean Water Act. No, or little mention is made of the controversies and risks surrounding sludge. Even though most of the contents are unknown, DEQ and the Extension Service state that sewage biosolids are safe. But, safety has never been proven. Also, many facts are omitted from their information, such as: farmers' insurance excludes damage resulting from pollutants; the amount of sewage sludge to be spread is calculated by the crop Nitrogen needed - resulting in 10 to 15 times required Phosphorus being applied; treating sludge does not eliminate disease-causing organisms; regulations cover only those few constituents that are test for - all the rest, even though they may persist in the soil and present many potential health and environmental risks are unregulated; some countries have banned sludge applying and many food companies have prohibited supplier use of sludge; the landowner is being "paid" with the few nutrients in sludge, in trade for the disposal of toxic waste on his land. Two extreme conflicts of interest: DEQ actually promotes biosolids even though regulating agencies should be neutral and the author of the Extension Service biosolids publications, besides being a VaTech faculty member, is also a paid consultant of the sludge industry. Farmers are a key factor in our food chain. For all of our sakes, they need complete, unbiased, transparent, unconflicted information with which to make their decisions.

Also, landowners are not fully informed about the hazards and risks associated with spreading sludge pollutants on their property. They are told it is free (true in the short term only), and it is fertilizer (false - it is pollution dumping in exchanges for some fertilizer benefit.)

Landowners must sign the application. Who checks that (a) all, and (b) the correct landowners have signed?

Landowners need to sign that they received complete and unbiased information on what sewage sludge biosolids is, not just that it is free. The definition of "pollution" needs to be included since the permit is for pollution abatement. Landowners must accept in writing full responsibility for any negative health or environmental effects that may occur either immediately or in the future.

Provision needs to be made for ensuring that all landowners, and the correct landowners, have signed the permit.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

A suggestion has been made that DEQ develop a method to verify that the landowner certification is made by the current property owner at the time of permit issuance. DEQ is not in the title business. In all of its regulatory programs (air, water, waste), applications require a

certification that the person seeking the application has the authority to operate the given project. DEQ does not second-guess such certifications, but takes them at face value. DEQ does not have the staff or resources to go behind every application or certification it receives to verify assertions of title or right.

The application requirements under both the VPDES and VPA programs require the inclusion of written consent of the landowner to apply biosolids on its property. It would be useful for the regulation to include a standard form for that purpose. This would ensure that the consent is in the form desired by the agency. Having the agreement standardized and incorporated into the regulation would be helpful. Additionally, the requirement that the agreement must reference site restrictions in the permit does not make sense, given the fact that the agreement must be obtained prior to receiving the permit. Instead, the agreement should reference the requirements of the regulations.

The consent is referred to both as "written consent" and as "landowner agreements." Are these the same thing? If so, consistent terminology should be used.

The proposed regulation requires new landowner agreements to be provided when an application is filed to add new land. The language relating to this must be reworked to make clear that new landowner agreements should be required for only those additional landowners, not for the land already covered by the permit (and for which a landowner agreement was already provided during the permitting process). See 9VAC25-332-530 B 3.

Commenter: Henderson, Jim, representing Citizens

Information presented to farmers who are considering the use of sludge does not disclose the many risks that exist. Farm operations which have been compromised, animals that have been killed or sickened, human disorders which have been documented, and other negative information has not been conveyed or referenced. Again this is partially the result of gag orders associated with legal suits. The regulations MUST insure complete disclosure of ALL risks associated with consenting to accept sewage sludge. Further, the regulations must require the landowner's signature that he accepts full responsibility for all such risks that may result in health and environmental problems either in the present or in the future.

Commenter: Laurrell, R. David, representing County of Campbell

Develop a method to verify that the landowner certification is made by the current property owner at the time of permit issuance application.

Commenter: Overbey, Jo, representing Citizens

The language of the "Biosolids Application Landowner's Agreements" makes it impossible for the Board to determine if the consents are valid.

They make no reference to the potential risks associated with land applied sewage sludge. Thus the Board has no way of knowing whether the landowners were made aware of and accepted those risks when they agreed to accept the waste. The Agreements also fail to state that the value of the nutrients and soil conditioning was the only payment landowners would receive for allowing their land to be used as waste disposal sites for sewage sludge. Indeed, the

Agreements fail to provide information to landowners that would enable them to calculate the tax consequences of accepting those payments. Instead, based on the language of the Agreement, the landowners could erroneously believe they were receiving something free. Thus the Board has no way of knowing whether the landowners understood what they might have consented to.

Because of the risks to landowners, the General Assembly set out an important threshold precondition to the issuance of a valid permit, a precondition that Nutri-Blend has failed to meet. § 62.1-44-19:3A(3) provides: "The permit application shall not be complete unless it includes the landowners' written consent to apply sewage sludge on his property." This statutory requirement is implemented in 9VAC25-32-60 C (1) which states: "A complete VPA permit application shall be submitted by the owner of the pollution management activity before a VPA permit can be issued." Nutri-Blend has not complied with this threshold precondition. The full responsibility for providing the required written landowners consents falls on the applicant, not on DEQ, not on the Board and especially not on citizens. Thus DEQ's admission that it fails to verify whether the required landowner consents have been provided is not surprising. However, that means that there can never be certainty on the part of the Board that it has a complete application before it. The Board should insert a provision in permits clearly stating that if written consent to allow sewage sludge to be applied on their property is not part of the permit application, the permit would be null and void and no land applications can be made there under. Although that is the statutory result if the precondition was not met, insertion of such language in the permit is absolutely essential because when DEQ subsequently learns that this precondition was not met, its current policy and practice is not only to refuse to direct the permittee not to make further land applications, but also to look the other way and allow the sewage sludge applications to unlawfully continue unabated. The language of the "Biosolids Application Landowner's Agreements" do not comply with the statutory consent requirement. Indeed, such consent cannot be found anywhere in those agreements.

When NutriBlend applied once again for a permit to spread in Campbell, a group of citizens worked hard to inform people who lived near the proposed spread sites that it was coming. We, not DEQ, found a number of errors in the permit. We went all the way to the SWCB meeting to object to the permit on the basis that it was not legal, as it no way fulfilled DEQ's obligation to protect health and the environment, in accordance with VA Code. We presented a solid case at both the local public hearing and again at the SWCB meeting, supporting our contention. After much discussion, we were told by the Board that they recognized that the Permit was flawed, but were obligated to pass it. However, we were promised that a number of deficiencies that we had pointed out would be addressed in the proposed amendments to the regulation, and that our permit would be folded under the umbrella of the new DEQ regulations. It was with great disappointment that I read the proposed amendments to the regulations. In no instance do they address the issues that we raised in a manner that will protect the health of our citizens or our environment. DEQ has gone through the motions, but appears to have primarily listened to the industry participants in writing these amendments, and both the Board and DEQ have ignored the issues that we raised. Under the Code of VA, lawful land applications are possible only under permits that comply with the Code. The prohibition against land application in the Code precludes any lawful land applications by NutriBlend in Campbell County. This, it is critical for the Board to make a number of changes to the proposed regulations and to make them a part of

NutriBlend's permit, before DEQ can authorize any lawful land applications. It is imperative that the Board address in the regulations how to make certain that DEQ precludes applications under other issued permits that are not valid under the Code of VA.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

A reasonable effort on the part of DEQ must begin by requiring the following certifications by the Permit Applicant or Permit Holder as well as the Landowners of the sites proposed for land application: "A permit to allow land application of sewage sludge is valid only if prior to submission to the Board there is valid written consent by all landowners at the time the application is submitted to the Board and valid consent continues at all times during the permit unless such sites are withdrawn from the permit. To reduce the risk of issuance of permits that do not authorize lawful land applications, Landowners in an agreement with the Permit Applicant or Permit Holder shall certify in writing that they constitute all of the owners of the site proposed for land application of sewage sludge; and if ownership should change or consent be withdrawn, DEQ and Permit Applicant or Permit Holder shall be immediately notified in writing. Permit Applicants and Permit Holders shall certify that Applicant/Holder has by due diligence confirmed that all owners of the property have signed this agreement; and that the Permit Holder will, following further due diligence, recertify prior to each land applications that there have been no consent withdrawals and/or ownership changes."

Both the current and draft regulations follow the Code and place the responsibility for obtaining and maintaining the agreement on the Permit Applicant/Permit Holder. However, neither the current nor draft regulations adequately address DEQ's obligation to submit only complete applications to the SWCB; much less the SWCB's authority to consider only complete applications. Under DEQ policies and practices submissions by Permit Applicants/Permit Holders are presumed to be accurate, and DEQ does not verify whether all landowners have been actually identified for purposes of submitting consent to allow sewage sludge to be land-applied on their property. That presumption does not change even when others have questioned the accuracy, or even when presented with evidence that not all landowners have been identified. As a result DEQ improperly deems applications to be complete and certifies the same to the SWCB. The SWCB then issues permits based on DEQ's misinformation that applications are complete. As a result, it is likely that a complete application has never been submitted to the Virginia Board of Health or to the State Water Control Board. Thus it is probable that every application occurring under current permits are prohibited by the Code of Virginia. The draft regulations fail to address this fatal defect. DEQ must have a reasonable basis to conclude that all landowners have been identified.

By policy and practice, DEQ relies on the honesty of those who sign the agreements, including whether they actually have authority to execute the agreement. Since the lack of an authorized signature results in permits that cannot authorize lawful land applications, it is essential that the certification requirement set forth below be part of the land application regulations: "Where the person signing on behalf of the landowner is representing another (e.g. Power do Attorney), or is an entity such as a corporation, partnership, trust, etc., the person executing the agreement shall attach sufficient documentation to establish that the person has the lawful authority from the landowners to provide consent and make the commitments set

forth in the agreement."

Ensure that Identified Landowners provide informed written consent. The draft regulations make no effort to address the current failure to ensure informed consent on the part of each landowner. DEQ (and its predecessor) have been reminded over the years that the landowner agreements are inadequate to enable DEQ to determine whether the requisite written landowner consent has been provided. Thus DEQ cannot legitimately advise the SWCB that the application is complete. In order for DEQ to comply with its statutory mandate, it is essential that the written consent of landowners clearly be based on potential risks in the context of existing factual and scientific data and the limitations of that data as well as the Landowners responsibilities following any disposal of sewage sludge waste on their property.

It is important for DEQ to clearly understand what responsibilities, if any, a given landowner, has actually agreed to perform on behalf of the Permit Holder. That could be accomplished with the following certification provision: "Landowners shall certify that they have accepted responsibility for the following permit requirements for which the Permit Applicant or Permit Holder has ultimate responsibility: _____ (This could include such things as: keeping cattle and people off the site per regulatory restrictions, applying potassium shortfalls, supplementing pH deficiencies, ensuring that health sensitive individuals are identified and not exposed and that pollution sensitive sites are excluded from application.) Where the landowner is not the farm operator and the farm operator agrees to be primarily responsible for permit requirements, the farm operator shall execute the written consent agreement and confirm the commitment to do so."

Landowners have the right to terminate consents at any time for any reason or for no reason. However, that has not been made clear to all landowners. Moreover, when consent is withdrawn, no sewage sludge may be applied to the site. Consistent with the statutory requirement that there must be valid landowner consents under a permit that authorizes lawful land applications. DEQ must add the following requirement: "Landowners may withdraw consent at any time with or without any reason. When consent of any landowner is withdrawn before Board approval, the site shall not be part of any issued permit that authorized lawful land applications. Where consent of any landowner is withdrawn after issuance of a permit, the site shall cease to be part of the permit and sewage sludge applications are prohibited thereon. Prior to every land-application, Permit Holder shall certify that valid consents are in place. Land application on sites following withdrawal of consent shall invalidate the issued Permit and the permit shall be null and void."

Require Landowner certifications accepting potential risks and obligations. Due to all the misinformation about free fertilizer and recycling, including the use of the word biosolids in lieu of the term treated sewage sludge as set forth in the statute; it is essential that landowners clearly understand that their property is being used for the disposal of sewage sludge, and the payment they will receive is the nutrient and soil amendments benefits of the sewage sludge. The following landowner certification must be required by the regulations: "Landowners shall certify that they are aware that they would be allowing treated sewage sludge to be land-applied on their property, that the only payment for disposal of this waste on their property is the value of the nutrient and soil amendment benefits, and that it is the Landowners' responsibility to

determine the tax consequences of receiving the nutrient and soil amendment benefits."

The nature and degree of risks to health and the environment are played down, if not ignored. However, full disclosure is essential if there is to be informed consent. Certification of landowners regarding indemnification is needed as part of DEQ's process of determining whether informed consent was provided: "Landowners shall certify that they have been made aware of and understand the risks associated with accepting sewage sludge, including the possibility that the permit may not be valid, as well as potential damages, including attorneys fees; and (have or have not) been offered and (have or have not) accepted full indemnity from the Permit Applicant or the Permit Holder and the Generator for any damages that might accrue as a result of the land application of Sewage sludge."

The regulations must also require the following certification from each of the identified Landowners: "Landowners shall certify that they constitute all of the owners, or together with _____ constitute all of the owners, of the following sites: _____(insert all relevant proposed sites)."

There are a number of requirements on the Permit Holder that result when sewage sludge is land-applied. In some cases some may continue long after expiration of the permit under which applications are made. Permit Holders sometimes attempt to delegate those responsibilities to the landowners via written agreements. There is nothing in the regulations to ensure that once sewage sludge is land-applied those obligations will be met. Additional provisions would include: "Permit Applicants/Permit Holders shall have an agreement with landowners setting all obligations that result from allowing sewage sludge to be land-applied. The agreement shall clearly provide which obligations the landowner will be responsible for, the responsibility and ability of the Permit Holder to ensure that those obligations are enforced, as well as adequate contractual penalties to ensure compliance by the landowners and/or the ability of the Permit Holder and/or DEQ to take all steps needed to ensure compliance."

There is a particular concern that the mischaracterization of sewage sludge as free fertilizer leaves absentee landowners at special risk. The following certification requirement is necessary for DEQ to confirm the existence of informed consent: "Landowners who do not farm the property understand the terms and conditions of transferring the nutrient and soil amendments benefits to the farm operator require a separate agreement between the landowner and the farm operator setting forth the terms and conditions of such transfer."

There remains the possibility that not all landowners have been identified. Thus if DEQ advises the SWCB that an application is complete, unless DEQ confirms in writing that it has verified that all Landowners have been identified, all permits must include the following language: "In the event that the Permit Applicant/Permit Holder failed to submit valid written consents from all landowners and a permit is issued; the permit shall be null and void and all land application of sewage sludge under the permit is prohibited."

Commenter: Winn, William and Barbara, representing Citizens

We are concerned as to the present application's long term effects on land receiving or people who may wish to buy it in the future. A record is needed and this record needs to be

available for the future buyers. A mechanism is needed for this protection.

DEQ Response to Comments: Landowner Agreements

The landowner agreement, which is a required component of a biosolids land application permit application, has been modified in response to public comment, TAC discussion and State Water Control Board amendments to permit conditions.

The landowner agreement amendments include the following statements that must be signed by the landowner:

1. This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids under this agreement.
2. In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:
 1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
 2. Notify the permit holder of the sale within two weeks following closing.
3. I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.
4. I (the landowner) agree to notify the Permittee upon signing any Biosolids Application Agreement with another Land Applier for the fields identified above during the life of this agreement.
5. I am the sole owner of the properties identified herein.
 I am one of multiple owners of the properties identified herein.
6. I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified herein and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during and after land application of permitted residuals for the purposes of determining compliance.

Class B biosolids Water treatment Residuals Other Industrial Sludges
7. I, the landowner, I have received the Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of

biosolids and proper handling and land application of biosolids.

8. I, the landowner, have been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices. [The list includes requirements regarding public access, crop restrictions, livestock access, and compliance with the nutrient management plan.]

The amended landowner agreement also requires that for each proposed land application field, the county Tax Parcel ID(s) shall be listed and identified on tax maps that are submitted with the landowner agreement.

An additional Multiple Owner Coordination Form is included for the Permittee to use to identify all owners of a property and their mailing address on a single document that will be accompanied by each signed landowner agreement.

New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids.

For permits modified in order to incorporate changes to the VPA regulation, the permit holder shall, within 60 days of the effective date of the permit modification, advise the landowner by certified letter of the requirement to provide a new landowner agreement. The letter shall include instructions to the landowner for signing and returning the new landowner agreement, and shall advise the landowner that the permit holder's receipt of such new landowner agreement is required prior to application of biosolids to the landowner's property.

Subject: [Legal Forms Referenced by the Regulation](#)

Commenter: Trumbo, Susan, representing Recyc Systems

All forms and specific language requires should be included in the regulations.

DEQ Response to Comments: [Legal Forms Referenced by the Regulation](#)

The landowner agreement form and permit application forms will be noticed on Town Hall.

Subject: [Local Monitors](#)

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The Code requires reimbursement of local governments that may undertake testing to better ensure that health and the environment are protected. Code § 62.1-44-19:3G established a Sludge Management Fund that provides in part: "...The income and principal of the Fund shall be used...and to reimburse localities with duly adopted ordinances provided for the testing and monitoring of land application of sewage sludge..." Unfortunately the draft regulations effectively preclude Code mandated reimbursement. Reimbursement is not assured and is effectively precluded for testing of pathogens, viruses and other harmful constituents under current DEQ policies and practices. 9VAC25-20-148 provides an opportunity to submit reasonable expenses: "A. Reasonable expenses for the following types of activities may be submitted for reimbursement: Charges for biosolids sewage sludge and soil sample testing costs. B. Charges for site monitoring not associated with determining compliance with state or federal law or regulations are ineligible for reimbursement." 9VAC25-20-149 A provides no standard for reasonable expenses and arbitrary cap on acceptable expenses: "Reimbursement of local monitoring costs deemed reasonable by the department will be made for costs up to \$2.50, per dry ton of biosolids sewage sludge land-applied in a county during the period of time specified in the submitted invoice. Costs of up to \$4.00 per dry ton of biosolids sewage sludge land-applied in a county during the period of time that the costs were incurred may be reimbursed with prior approval from the department."

The Code's reimbursement provision was requested by citizens because VDH refused to consider testing for more than a few heavy metals and nutrients, even following health complaints. Following adoption of the reimbursement requirement, VDH refused to consider reimbursement for testing of any additional constituents in sewage sludge, effectively mooting the Code's requirement. DEQ's current policies and practices indicate that it will follow VDH's lead and refuse to reimburse local governments for testing as required by § 62.1-44-19:3G of the Code. The number of constituents to be tested for is directly impacted by the extent to which DEQ's regulations otherwise ensure (1) that health sensitive individuals are not exposed to constituents that may be in any given sewage sludge and (2) the extent to which pollution sensitive sites have been identified and eliminated. If DEQ fails to ensure that health sensitive individuals are not exposed, then testing for any constituent (that could reasonably be present) that medical professionals believe could adversely impact health must be reimbursed. Similarly, if DEQ fails to ensure that no constituents could enter into surface or underground water, then all constituents that could reasonably be present that could harm the environment must be reimbursed. At a minimum, the regulations must be amended to clearly provide for reimbursement for reasonable testing when DEQ fails to undertake such testing to ensure that health is protected. Language must be added to Section 20-148 and might read: "Reasonable expenses for the following types of activities may be submitted for reimbursement, including reasonable costs to test sewage sludge for pathogens, viruses and other constituents that could explain health and environmental complaints: Charges for sewage sludge and soil sample testing costs."

DEQ Response to Comments: Local Monitors

§ [62.1-44.19:3](#). G. and I. of the Code of Virginia and the Part IV of the VPA regulation 9VAC25-32 outline the funding mechanism in which localities with duly adopted ordinances can request reimbursement for testing and monitoring conducted by a locality employee. DEQ

encourages local governments to exercise this ability to supplement oversight and provide a local presence where these activities occur. The role of the local monitor is to monitor the use of biosolids to ensure state and federal requirements are met, just like a DEQ biosolids inspector.

Subject: [Maps Required for Site Identification](#)

Commenter: Burleigh, Mary Ann, representing Citizens

Require applicants for the land application of biosolids to use the most advanced mapping resources readily available to include GIS mapping in those localities that provide that technology.

Commenter: Davis, Brandon P., representing Shenandoah County

Require applicants for the land application of biosolids to use the most advanced mapping resources readily available to include GIS mapping in those localities that provide that technology.

Commenter: Foster, Ed, representing Citizens

Along with the submission of the application, tax map numbers shall be included. This has been shown to be a major problem as the applicant either does not know who owns the land or doesn't care.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-60 F 2 b (4)(d) requires that 100-year floodplains be identified. How does one find the 100-year floodplains information?

The application requirements for biosolids permits are extremely onerous and raise questions about how some of the information can best be obtained. Likewise, some clarification is needed for some of the requirements. For example, 9VAC25-32-60 F 2 b(3) requires a site map for storage sites including field features within 0.25 miles of the site boundary. It is unclear why 0.25 miles was selected. It is also unclear how that distance is measured. We would propose that the distance be measured from edge of application area rather than property line.

Commenter: Laurrell, R. David, representing County of Campbell

Require applicants for the land application of biosolids to use the most advanced mapping resources readily available to include GIS mapping in those localities that provide that technology.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Mapping Requirements - VAMWA submits that the requirement to submit a tax map is

unnecessary, as DEQ will be assigning an individual control number to each permitted site. In addition, a soil map is more appropriately included in a NMP. VAMWA requests that DEQ strike the requirement for a tax map and a soil map.

DEQ Response to Comments: Maps Required for Site Identification

Based on experience with permit applications submitted since the program was transferred to DEQ, it has been determined that these maps are required for accurate permitting. The topographic map depicts the lay of the land and features that will affect where the biosolids can be applied; the tax map is used to determine the boundaries of the property that is legally authorized to receive biosolids; the transport map is required so that it will be available for public review at the public informational meeting; the soils map is needed for DEQ staff to evaluate the field's suitability for land application. The various floodplains may be found on FEMA Maps.

Subject: [Monitoring and Inspections](#)

Commenter: Burleigh, Mary Ann, representing Self

I live in the Concord area of Campbell County and work for Campbell County. NutriBlend was spreading sludge on a farm owned by G.D. Gilliam which adjoins our property. Sludge was being spread on a field(also owned by Mr. Gilliam) adjacent to our property. Based on information on the County website, this field was not included in the sludge permit. I verified that information and also checked in on GIS, then called the local DEQ office. Mr. Cheatham, from that office, and the person who oversees the spreading of sludge in Campbell Co., went out to the property that afternoon, and verified that the field adjoining our property was indeed not included in the permit. Mr. Cheatham told me that he was going to forward this to another department within DEQ to be investigated. I waited over two months for a reply from DEQ, but as to date I have not heard anything from them. We raise our own food yearly within 50 to 75 feet of the property line. The dug well used to water the garden and horses is also located near the property line. Our intent is to build a home there in the near future. Not only are we very concerned about the safety of our food and livestock, but also about the carelessness of NutriBlend and the DEQ oversight (or lack of it). I am not sure what, if anything, can be done to correct this. I would welcome any suggestions you may have. It is my understanding that Campbell County cannot keep sludge out due to the "Dillon Rule". As our representative, I am asking that the General Assembly take up this matter and give the localities the ability to decide whether or not sludge can be spread in their county. When sludge was allowed to be spread in Campbell County, the citizens were assured that it would be tightly controlled. Apparently, that is not the case.

Commenter: Clabough, Jeanne W., Ph.D, representing Citizens

There is inadequate close monitoring by government officials of land applications of biosolids. Following application on two farms in our neighborhood, we found that sludge was

dropped along a half-mile section of county road and was put down within seventy-five feet of a neighbor's well. When the VDH was contacted, they referred us to Nutri-Blend, the offending company whose spokesman "assured" us there was no need for concern. Virginias are depending on the DEQ to be better informed and more responsive.

Commenter: Elliott, Judy, representing Citizens

I do not plan on applying sludge on my farm in Campbell County. The Sludge Companies are pretty much on their honor system. Who comes back to the application site within 30 days to make sure that cows have not been allowed back in the fields and who comes back within 60 days to make sure that the farmer has not planted crops on the application site? The 30 day restriction for cows should be extended to 60 days.

Commenter: Foster, Ed, representing Citizens

Where was DEQ when NutriBlend illegally spread a 22 acre field in Concord in January? Oh, that's right. They were onsite that morning inspecting the field, another glaring example of their incompetence. Why hasn't NutriBlend's permit been pulled? Why hasn't DEQ been punished for failing to do its job? Questions with no answers.

Commenter: Graf, Mary, representing Citizens

Regulations, and permits by extension, cannot regulate that which they don't know. There can be over 80,000 known chemicals, as well as how many unknown proprietary chemicals, in sewage sludge. Only a paltry ten are monitored.

Though there is oversight of land applications by DWQ and some by our county monitor the oversight is not constant. No one is on site during the entire operation. The lack of continued presence of DEQ and/or county monitor means there is no one to confirm that the number of loads delivered actually tallies with the number of loads sent by the producer, and tallies with the tonnage permitted on the Nutrient Management Plan. Much of this record keeping and oversight is often left to the hauler himself. Full time independent monitoring and oversight during the entire operation is a must if citizens are to be assured that each and every regulation is indeed being followed, and that their rights to health and well being are protected.

Commenter: Hatcher, Roger F., representing Farmers

Establish a department or group to monitor the quality of biosolids approved for land application. This group would work primarily with POTWs. When a biosolids is considered Class A or B, treat it like a fertilizer, subject to farmer's control.

Commenter: Hazelgrove, Joe, representing Farmers

My family has a 300 head dairy cow operation on over 2,000 acres. We have 800 acres of harvestable and non-harvestable cover crops under a Nutrient Management Plan. We have used biosolids for the last 15 years and its use has been extremely beneficial to our farm. My concern deals with regulation or overregulation of the agricultural community. The proposed changes in pH requirements, increase in signage, phosphorus requirements and the extension of buffers is another intrusion into farmers operations. I agree that the use of biosolids needs some oversight to ensure that the rules and regulations are followed but we do not need bureaucratic overkill.

Commenter: Henderson, Jim, representing Citizens

Germs, spores, and other biological agents, many of which come from allowable medical waste, can live through every process but high radiation. These agents can lie at rest until growing conditions are right even after application on a field. They can then be distributed by contact, wind, water, or other means, causing distress to people (or animals), especially to those with breathing or immune system problems. These conditions have been reported. However getting reliable data has been compromised because of gag orders associated with legal settlements. We cannot afford the risk of contributing to the spread of "bad bugs" which can be spread by land, water, or air. We cannot afford the risk of a breach of "best practice" or negligence in the sterilization process at the sludge source, either of which would drastically increase the spreading these agents. One accident or breach of procedure could have negative consequences for a significant population, including future generations. The regulations do not address these issues of pathogens that survive treatment, nor of those that regrow after being spread.

Commenter: Johnston, Kathleen, representing Madison County Residents

What tests does the state, DEQ, or otherwise, perform on "biosolids" to ascertain their contents prior to application in any given county or on any given applicant's land? When are the tests performed, by whom, and are the results made public? If so, how and in what time frame relative to the application requests/actual application? If the state does not perform such tests or other tests as referenced above, who does perform such tests or other tests to determine contents of the biosolids to be applied, with the understanding that determining the contents of biosolids to be applied can be an indication of relative safety to human health or relative lack of safety to human health.

Commenter: Jones, V. Rea, representing Farmers

Present restrictions offer protection that is monitored and inspected. Further restrictions will cause loss of productive land.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Sections 9VAC25-31-547 A and 9VAC25-32-480 A allow DEQ to require monitoring wells for biosolids land application sites. This should be modified to make it clear that groundwater monitoring may be required for frequent application sites only. Traditionally, monitoring wells have not been required for infrequent sites, and there has been no rationale provided as to why that should be changes. Additionally, criteria for when such requirements may be imposed should be provided.

Commenter: Layne, Bill, representing Citizens

Our governing bodies and the EPA are inconsistent and unreasonable. On one hand you want to clean up the Chesapeake Bay, and on the other you advocate spreading toxic sludge on our land. Sludge has not yet been proven to be safe to people, animals, the environment, or the Bay. Most reasonable, thinking people would like to see sludge use on farmland outlawed completely. But until then, I agree that we need more rigid testing and monitoring and wider buffer zones for people who own land or live near being sludged.

22 acres of land adjoining my land that they did not have a permit for use was sludged.

Where was the DEQ and those who were supposed to monitor this site? Someone was not doing his job. And I don't think it was an honest mistake. So please monitor and test more closely before sludge is spread. Charge a heavy fee for every ton to offset your expenses. It is not fair to extend these charges to the taxpayer!

Commenter: Martin, Steve and Popie, representing Citizens

DEQ in its presentation at the June 21, 2011 hearing on the Amherst application stated that 80% of the sludged farms are monitored and 65% of sludged fields are monitored to insure that the nutrient management plan is being correctly followed, 100% monitoring should be required.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

Full/complete monitoring of all land applications should be required by the regulation.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

Past applications of sludge have been haphazard at best. We've had overspray on our land (and we practice all organic, sustainable methods) and VA DEQ would not fine or hold the person applying the sludge responsible. That overspray immediately killed approximately 3/4 acres of our grazing land for our cattle. It took 6 months to recover and we could not graze that portion of our land. It is also why we are unable to obtain Certified Organic status because of the irresponsible application of sludge in the fields next to us.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

According to the VDH, it is not possible to make a definitive statement about the safety of sludge because we do not know the actual contents of the sludge and there is a complete lack of knowledge regarding the health effects of some of the contaminants that may be present in the sludge. Sewage treatment plants are not designed to remove many of the chemicals that are currently entering the waste stream. Because these chemicals are not removed in the treatment process, they also end up in the sludge. The US EPA recently found 145 different chemicals in sewage sludge. Despite language in the state regulations stating that "biosolids may be required to be tested for certain organic compounds prior to agricultural use", the draft regulations require analysis for only 9 heavy metals. To ensure the protection of surface and groundwater resources, the regulations must require a more complete chemical characterization of sewage sludge. Biosolids should be monitored for an expanded list of pollutants that are known to be present in sewage sludge. Twenty-two (22) heavy metals occurred in each of 84 biosolids samples analyzed by EPA in the most recent Targeted National Sewage Sludge Survey. Requiring the analysis of only 9 heavy metals does not provide enough information to ensure protection of the environment or human health. At a minimum, biosolids monitoring should include aluminum, barium, beryllium, boron, calcium, manganese and silver (identified by EPA as metals of concern in sewage sludge and/or additional screening parameters identified in VPA regulations). Because this sludge will come from municipal sources and may affect drinking water sources, analyses should also be required for the organic chemicals listed in Table 1 of the VPA Permit Regulations (9VAC25-32-570).

Commenter: Overbey, Jo, representing Citizens

In order to ensure that statutory and regulatory requirements are met, it is necessary that those requirements are enforced. However, the failure of DEQ to enforce the regulation is systemic. Examples range from the refusal to ensure that statutory requirements such as nitrogen and phosphorus applications do not exceed agronomic rates, to the failure to exclude application on pollution sensitive sites; to allowing unincorporated applications; and to allowing land applications in the vicinity of health sensitive individuals when adequate buffers to protect them are not imposed. As stated earlier, it also includes the refusal to stop land applications under invalid permits (i.e., when it becomes known that valid written landowner consents had not been provided at the time when an application was submitted to the Board.) It is submitted that until DEQ demonstrated a consistent and adequate enforcement of regulatory requirements needed to ensure that the environment, health, safety and welfare are protected, DEQ cannot carry out its mandate to ensure that they are protected. Thus the Board is not in a position to issue valid permits to land-apply sewage sludge to anyone.

Commenter: Paulson, Eric, representing Madison County Residents

I am very concerned that the sludge biosolids may not be adequately regulated for safety and that existing regulations are not being enforced. The last time our neighbor used biosolids on his property the county had no one monitoring virtually any of the delivery truck loads. No one from the county government or the state could confirm that the amount of sludge being delivered was within allowable limits. Besides the threat to our water quality and the lax monitoring of the delivered sludge, we were truly endangered by the reckless way the delivery drivers drove their huge trucks along our narrow dirt road.

Commenter: Potter, Lorraine, representing Citizens

In Campbell County 2,000 acres have been sludged. The current regulations have not been followed. 400 tons of sludge were dumped by mistake on over 20 acres not in the permit. There was no oversight. The incident was reported by a neighbor. DEQ has yet to give any response as to how this happened who was at fault and what is being done so that this does not happen again. Citizen requests are not being addressed and questions to DEQ are not being answered. DEQ is not able to check on Nutri-Blend or to make them follow their permit.

The continued dumping of out of state sewage with little or no oversight is not what the legislature intended when they took the sludge program away from VDH and gave it to DEQ. DEQ, like VDH, is violating the letter and the spirit of the law. No new permits should be issued until new regulations are in place.

Commenter: Sligh, David, representing Riverkeepers

Monitoring and buffer requirements are set arbitrarily, apparently based upon assumptions about environmental conditions that do not exist in parts of at least 27 of Virginia's 95 counties, including some counties with the state's highest concentrations of land in farming, where use of sludge for fertilizer is most likely to occur.

Commenter: Turpin, Richard B., representing Citizens

Test every container load before applying and only apply those that contain no "bad" stuff.

DEQ Response to Comments: Monitoring and Inspections

The current inspection staff is dedicated to ensuring compliance with issued permits and the permittee is required to give DEQ staff notice prior to land application of biosolids so that unannounced site inspections may be conducted while land application of biosolids is in progress. The daily notice requirement, required to be submitted no more than 24 hours prior to commencement of biosolids activities (including delivery) at a site is included in the regulation as a means to have inspectors able to arrive at a site at the start of their work day, rather than arrive in the office and await notification of where land application activity is occurring. In order to determine compliance with the law and regulations, DEQ is currently inspecting approximately 80% of the farms where biosolids is applied, and inspecting approximately 70% of the farms during land application activities. DEQ utilizes corrective action, as well as formal enforcement if necessary to ensure compliance.

Subject: [Notification Procedures - Local Government and Citizens](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

The notification requirements should be changed to include: (2) "daily notification prior to commencing planned land application activities," should be changed to "24 hour notification..."

The notification requirements should be changed to include: (1) the local government biosolids monitor in those cases where a biosolids monitor has been designated,

The regulations should include a provision that DEQ and the SWCB, establish and operate a transparent process whereby the public's confidence in the review and use of pertinent scientific literature is obtained and maintained. This principle should be adopted before making final changes to the regulations under revision.

Commenter: Burleigh, Mary Ann, representing Citizens

Allow 100-day notification only for existing, permitted sites. Require land appliers to provide the 100-day notice to localities of the anticipated land application of biosolids to include only such information that is reasonably expected to occur with the most specific times and places as is available at the time of the notification. Do not allow conceptual, generalized and speculative information to be used as meeting the 100-day notification requirement. Do not allow notification to be made on sites not yet permitted.

Require site signage that is easily recognizable and legible to the normal person on adjacent properties and areas fronting public roads.

Commenter: Coulling, Philip, representing Rockbridge Area Conservation Council

Although data on chemicals present in biosolids are limited, our understanding is even more limited of the risks from those chemicals to human health and the environment, their potential for bioaccumulation, mobility in water, air, and soil, breakdown products, and biodegradation

of both the individual compounds themselves and the complex mixtures of chemicals in sludges. Despite the best science and efforts of the Department, many unknowns still exist about the health effects, persistence, and transport of some of the modern pharmaceuticals and other compounds EPA has now documented as widely occurring in sewage sludges. We therefore strongly recommend that the department require that a permanent notice be recorded in the deeds of properties where land application has occurred so that future land owners will have proper notice of the activities that occurred on the property.

Commenter: Davis, Brandon P., representing Shenandoah County

The notification requirements should be changed to include: (1) the local government biosolids monitor in those cases where a biosolids monitor has been designated, and (2) "daily notification prior to commencing planned land application activities," should be changed to "not less than 24 hour notification..."

The time period for posting of signs where land application is to occur should be increased from "five" to "fifteen" business days prior to and after application and sign content requirements must include the name(s) of the property owners.

Commenter: Foster, Ed, representing Citizens

14 Day Notification: Proposed language in regulation (If multiple sites are included in the notification, the permit holder shall make a good faith effort to identify the most probable order that land application will commence.) This should be changes to 14 day notification shall be given individually on each tract to be spread. This will give adjoining landowners a chance to make plans to leave if they have health concerns.

It has been determined that within the 14 days prior to an application there are too many variables that will affect whether or not you can actually apply at the site, therefore the proposed reporting details have been removed. The original statute language will remain in the regulation. A new requirement has been included to require notice to the DEQ and County when the signs are put in place at the land application site 5 business days prior to land application beginning.

No proposed sites shall be submitted with the 100 day notice -- only permitted sites. This has caused problems in interpretation and needs to be clarified.

The language will be clarified to indicate the 100 day notice may be made by DEQ when the permit application package is submitted to the county.

Posting of Signs: Signs shall be yellow in color with black lettering large enough to read from the highway while driving by, 4ft X 4 ft in size, and put up one week in advance and left in place 30 days after spreading is complete. Signs need to be 500 ft apart along the boundary of fields to ensure that public is aware sludge is being spread on the fields. One sign on a 900 acre spread site is not enough. This should not be construed as an imposition on the sludge companies.) I have witnessed firsthand that the one sign required was turned facing the field, not the road on one tract, and another was placed behind a wooden fence and couldn't be seen from the road. DEQ inspectors were passing these signs daily and did not notice anything wrong. Permit holders shall replace or repair (not at their discretion) any sign before, during,

and for 30 days after spreading.

Commenter: Graf, Charles, representing Citizens

Proper signage was addressed at the TAC meetings. No improvement has been made in the new regulation other than to post signs for a little longer. The signs must: 1) Have as their purpose to notify and warn individuals in the vicinity, so they have time to plan and take precautionary action. 2) Be at least 4ft. X 6ft. 3) "WARNING" in orange 10" letters at the top of the sign. 4) A 24/7 phone number of a responsible individual who can be reached in an emergency. 5) Signs need to be placed: a) Close enough to the road to be read by a car passing by at 55 mph. b) Posted in such a manner necessary to notify all residents whose property is adjacent to the sludge site. This requires multiple signs, not just one at the field entrance. 6) Signs must be posted 14 days prior to spreading, in order to give notice that spreading is imminent. Signs must remain in place for 1 year after spreading is complete in order, as EPA requires for areas of high pedestrian traffic, to protect humans.

The permittee shall notify by USPS, all residents living within a mile of the proposed spread site. This would give those who are health sensitive individuals the opportunity to receive increased buffers and/or to take further protective action. This individual notification should be part of the 100 day notice.

Weakening enforcement of the regulations is the use of the term, "substantial compliance". An example of this abuse is the requirement of the sign at the sludge site to include the name and the phone number of a responsible individual at both DEQ and the spreading company. Our signs in Campbell County had the general office numbers of both, but no individual could be contacted. Further, the signs were positioned behind weedy fences, at bends in the road, and at a distance back from the roadway so as to make them not only unnoticeable, but also unreadable. At one point the sign was turned so the lettering faced the field and not the road. When complaints were made to DEQ -- we were told the signs were in "substantial compliance". These regulations are in fact not regulations. They are just a list of suggestions. This climate of non-compliance renders the regulations impotent and substantially out of compliance with VA Code. Several times we tried to contact DEQ and we got an email saying the recipient was out of the office till next week.

Commenter: Graf, Mary, representing Citizens

Neither permits nor regulations provide for notifying future buyers of sludged properties.

Notify individuals near proposed fields in a more effective manner. Posting signs has not been effective. Dr. Mark Levine, recommended, and the Regulations need to require "property owners to submit evidence that their neighbors have been notified. This allows the neighbors to identify concerns (health or otherwise) prior to the issuance of a permit."

Provision for notifying future buyers of sludged land needs to be included in the regulations. Future owners need to be made aware of the importance of pH management, as well as any crop-growing restrictions that may be in effect. The lame amendment made to several county permits does not suffice.

Regulations need to state exactly how persons residing on property bordering sites will be notified when individual notification is required.

Signs and other notification are inadequate and ineffective. In reality, in our experience, neighbors don't know when sludge is about to be spread. Signs have been too small to be noticed and read while driving, they've been placed behind board fences and at curves in the road. They've been turned as to be unreadable. In NO way do the present signs actually notify neighbors. Also, the regulations call for an individual's name on the sign, of which there is none. DEQ tells us they are in "substantial compliance". Signs need to be at least 4 ft. X 4 ft. with warning orange on them, and a 24/7 contact number that gives you a person, not a voice mail box.

Signs: need to be 4'x8' and include warning orange on them in order to be noticed; letters need to be large enough to be read by passing vehicles; signs must be placed near the road and not behind fences, and not at hills or curves where attention needs to be on driving; additional signs are needed when the site includes adjacent residences on more than one roadway; signs need to include a 24/7 contact number that connects with a person, not a voice mail box; and signs need to stay in place a full year in order to alert the public of necessary precautions.

Commenter: Hatcher, Roger F., representing Farmers

Forget about public notification signs. Have farmers using biosolids install permanent plaques (12" X 14" or so) at appropriate locations. Also drop the 14-day notification to the counties. Most counties have only one monitor and one contractor. Twenty-four hours is adequate notification. Farmers simply do not plan 14 days in advance (except in general terms). Weather generally determines what field will be fertilized and when. This can and does often change daily. A rain event that eliminates one flat field may have minimal impact on rolling topography. Over the years we have found the notification process to be extremely detrimental. Not only rain events but delays in harvesting grains or hay crops make day to day management very challenging.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The notification requirements found in the proposed regulation (9VAC25-31-485 D; 9VAC25-32-515 A 1) should be consistent with the provisions of VA Code § 62.1-44.19:3. Additionally, the requirements should be clarified to note that this is a one-time notification. The notification can be supplemented if any additional sites are added to the permit.

There are other references elsewhere in the regulation to compliance with local ordinances (9VAC25-31-485 H - a substantive complaint is one that alleges a violation of a local ordinance). There is a requirement that the locality is notified of land application during the permitting process. That process ensures that land application is consistent with local ordinances. The determination of a substantive complaint should be limited to compliance with the permit issued by the department.

The timing provisions should be clarified and consistent throughout. Land applicators and sewage treatment plants operated seven days a week, so it is unclear what is meant by "business days" for these types of operations. Likewise, when a reference is made to a "daily"

requirement, clarification is needed about whether this term means within 24 hours or during normal business hours.

Commenter: Johnston, Kit, representing Madison County Residents

Not everyone subscribes to local newspapers. If this is considered the legal standard, it really needs to be changed. Informational meetings on sludge in some locales have not been adequately advertised if the intention of the advertisement was to inform the public. There has been inadequate public notice for sludge permit applications.

Commenter: Laurrell, R. David, representing County of Campbell

Allow 100-day notification only for existing, permitted sites. Require land appliers to provide the 100-day notice to localities of the anticipated land application of biosolids to include only such information that is reasonably expected to occur with the most specific times and places as is available at the time of the notification. Do not allow conceptual, generalized and speculative information to be used as meeting the 100-day notification requirement. Do not allow notification to be made on sites not yet permitted.

The 100 day notice is a tool to make the county aware that a new site is being authorized to receive biosolids.

Require site signage that is easily recognizable and legible to the normal person on adjacent properties and areas fronting public roads.

Commenter: Layne, Bill, representing Citizens

All citizens need to be informed of the spreading of sludge, not only by signs on the property to be spread, but in the local newspapers several times prior to the spreading of sludge. Some other form of notification beside signs need to be used. Newspapers or personal notifications by U.S. Mail should be used to ensure that all adjoining property owners receive notification.

Commenter: Martin, Steve and Popie, representing Citizens

It is imperative to have a fool proof method of ensuring that future property owners are notified of the fact that sludge has been applied to land. This is important not only to ensure that those owners do not inadvertently grow food crops on the land during the prohibited period but also to keep an accurate record of where sludge has been applied in the event remediation is required in the future. The only fool proof method of providing notification about anything related to real property is to record that information in the land records at the Clerk's Offices. Recording this information in this manner is far superior to relying on the farmer or applicator to be responsible. Recordation in the Clerk's Office is also far superior to keeping some type of register at DEQ. The public will not know where to go and such a record could easily get lost.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

There should be some mechanism in place to notify future property owners of sludge applications on their properties should problems be identified with sludge applications in the future. There should be accurate records of where sludge has been applied. This information could be recorded in the land records in the clerk's office. This could be done for \$26. That way the information on properties where sludge has been applied could be found through a title search. The board should require this in the regulations.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

To bury the notice in the legal notices section was an unusual way to provide adequate and clear notice to other land and homeowners in the area.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

It is difficult to tell whether these proposed regulations require prior notification to the local government of the exact date of application. The regulations should explicitly require the permit holder to notify counties of specific delivery dates for any sewage sludge being applied in the county and the specific locations within the county where it will be applied.

Permit modifications and a public hearing should be required for any additional acreage proposed to be added to a permit. Allowing an increase of up to 50% in acreage covered by a permit without any public notice or review is excessive and precludes any review necessary to protect the environment and human health.

Commenter: Regnery, Audrey, representing Madison County Residents

I was quite disturbed to find the way in which you notified citizens, by putting it in a legal notice was very sneaky and most underhanded. If you had been on the up and up it would have been in a larger sized article, not in a one by two inch size and hidden away in the legal notices.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

The notification requirements found in the proposed regulation (9VAC25-31-485 D; 9VAC25-32-515 A 1) should be consistent with the provisions of VA Code § 62.1-44.19:3. Additionally, the requirements should be clarified to note that this is a one-time notification. The notification can be supplemented if any additional sites are added to the permit.

The notification requirements include a determination of the most probable order that land application will commence. This requirement should be deleted.

The proposed regulation requires that a permittee provide daily notification to the department and the executive officer of the local government where the site is located prior to commencing planned land application activities (9VAC25-32-515 A 3). This provision should be written in manner that allows more flexibility.

While it is important to provide details associated with sign content, there also is merit in allowing some flexibility to its content. A farmer chooses to use biosolids to benefit his farms and fields. We would suggest allowing for some flexibility of the sign content beyond what is mandated by the regulations, thereby allowing farmers the opportunity to reflect on the benefit of recycling biosolids on their permitted farms.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

DEQ proposes to allow the addition of sites acquired by new property owners as well as additional sites from the same or additional landowners. In some cases it proposes to allow sites

to be added without public notice and opportunity to object - effectively eliminating the one area in which DEQ acknowledges that deficient landowner consents have been brought to its attention. To the extent that either is allowed under the final regulations, DEQ must add the following requirement: "Land application of sewage sludge on sites where ownership is transferred and on sites added after the issuance of a permit shall invalidate the issued Permit unless new landowners have provided valid written consent prior to any land application. If a site is added to the permit without valid landowner consent, the permit is null and void and no applications can be made under any such permit."

Notice to subsequent landowners presents a special challenge unless there is a clear provision to ensure that subsequent landowners are aware of the special restrictions that follow the land. (Those restrictions may range from the inability to qualify for "organic" production to prohibiting the growing of certain crops to mandatory pH level requirements.) The only method of ensuring notice to subsequent landowners is with an appropriate reference to the restricted use on the Title of the property on which sewage sludge is land-applied. This can be accomplished with the following language: "Prior to land application on any site, the Permit Holder must provide DEQ a copy of a recorded Title Instrument identifying the specific sites where sewage sludge has been approved by permit for land application on the site and specifying restrictions and special obligations that affect future use of the land. (Those restrictions must be identified in the document, with a requirement that prospective purchasers or users must contact DEQ to confirm whether sewage sludge was applied under the permit, to secure a full list and to determine whether there have been complaints and/or instances of noncompliance with applicable laws.) Following each land application, Permit Holders shall record a further Title Instrument identifying for each site the date on which sewage sludge applications were made, the source of the sewage sludge, the amount applied and a complete list of any failures to comply with any applicable federal or state law."

Signage requirements are needed to convey warnings for a year to health sensitive individuals to make certain to minimize or avoid exposure to sewage sludge contaminants that could cause harm. Instead of warning individuals to stay off the sites and as far away as may be needed to protect their health, and to direct them to medical professionals for assistance, the signs have been placed to reduce their visibility to the public and designed to serve as a marketing tool.

The Guidance memo also fails to address other important situations. For example, land application sites are off limits to the public for a year. However, the draft regulations fail to provide adequate notice to ensure that the public does not come onto the site during that one-year period. There must be adequate warning signs in place during the one-year period to ensure that health is protected. This can be corrected as follows: "There shall be sufficient signs placed to ensure that the public is warned for a one-year period following any land application not to trespass because of risks associated with land-applied sewage on the sites. The wording, size, placement, and readability must be sufficient to clearly warn against trespass because of the risks to health."

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The 14-day notification requirement unnecessarily includes the tax number for sites on which land application is to take place and a map indicating haul routes to each site. The tax map number requirement is redundant, given that the DEQ control number is also required. Since the tax map number does not provide any additional information of use to DEQ, so it should be eliminated. In addition, VAMWA believes it would be more efficient and just as effective for the permittee to provide a description of the proposed haul routes (versus providing maps, especially if they are being sent electronically).

The proposed regulations would require permit holders to notify DEQ and local governments in writing at least 14 days prior to commencement of biosolids land application and on a daily basis when land application activities are underway. These requirements are burdensome, in excess of statutory requirements, and in many ways, provide little benefit. VAMWA requests that DEQ delete the 14-day and daily local notification requirements. By statute, a permittee must notify DEQ 14 days prior to land application; there is no similar requirement for notice to the local government. Nevertheless, the proposed regulations would require 14-day written notification to the chief executive office or designee for the local government where the site is located. We question the benefit of requiring this additional paperwork. In our experience, it is difficult to identify the proper person to receive this notice, and many localities are simply not interested in the information provided. The requirement for daily notification is also inconsistent with state law. That said, consistent with TAC discussions, providing DEQ with a single notification (by e-mail, telephone, or fax) at the beginning of the land application period with an estimate for the length of time land application is expected to continue is reasonable. This would serve the same purpose and eliminate the onerous task of sending a written notification each day of the process.

Commenter: Stevick, Stephen M., representing Citizens

Sewage sludge may vary significantly from sample to sample, given variations in origin and treatment. Public notification of the permit under which the sludge is being land applied, and the sludge being proposed to be land applied should direct the reader to a source or the sources of all information of record (with sewage treatment source, testing records, the distributor and government agencies) sufficient for the reader to assess whether the proposal poses a threat to his/her health. The source material should state precisely the contents of sewage sludge, the risks presented as a result of exposure to said contents and the remedies called for. This information should be made available to the public as a matter of course, and specifically where public notices of land application of sewage sludge are required.

Sufficient time should be allowed for public review of the notice and consultation with appropriate personal medical and veterinarian specialists to determine potential risks of exposure, appropriate notification to appropriate state officials and sufficient time for a full and responsible hearing of stated concerns. The current practice of allowing 48 hours of notification and time response, which includes weekends, is insufficient for these purposes and disingenuous, at best.

Commenter: Turpin, Richard B., representing Citizens

The posting on application locations must be 100 days before first application, must be clearly visible to the public and in sufficient numbers to be seen.

Commenter: Wagner, Steve, representing Farmers

It seems that Southside Virginia was overlooked in the public hearing agenda. How about Dinwiddie or Farmville, etc. for a future meeting site for your next round of meetings?

Commenter: Winn, William and Barbara, representing Citizens

We advocate notification be adequate, timely and pertinent.

DEQ Response to Comments: Notification Procedures - Local Government and Citizens

The regulations provide for multiple opportunities for notification of the local government and the public regarding the land application of biosolids in their county. DEQ believes that the various timings and methods of notification are more than adequate to assure that the public is made aware of biosolids activities. Based on § 62.1-44.19:3 of the Code of Virginia, the proposed amendments to the VPDES and VPA regulations require:

1. At the time a permit application is submitted to the department, DEQ will provide:
 - a. Notification to the local government that DEQ has received a permit application to authorize to land application of biosolids in their county and that a public informational meeting will be held. DEQ staff provides this notification in a letter to the locality that will provide the location of fields proposed to receive biosolids in the permit application and offers the opportunity to review the entire permit application package.
 - b. Notification to “persons residing on property bordering the sites that contain the proposed land application fields” (9VAC 25-31-290.H. and 9VAC25-32-140.B.3). DEQ staff will provide this notification in a letter that offers the property owner the opportunity to review the permit application and makes them aware that they have 30 days in which to submit comments regarding the permit application. The letter will also provide the following information:
 - i. The date, time and location of the public informational meeting;
 - ii. The process for requesting extended setbacks from occupied dwellings and property lines;
 - iii. A photo or illustration of the signs used by the permit applicant and an explanation that they will be posted at least 5 days prior to delivery and land applications of biosolids; and
 - iv. Information that a comment period will occur after the completion of a draft permit and prior to the permit being issued.

The proposed regulation goes beyond the statutory requirements by requiring that adjacent land owners are always notified when a permit application is received or new sites are added to a permit, rather than only when < 50% of originally permitted land is added.

- c. Public notice of the informational meeting is advertised in a local newspaper as required by § 62.1-44.19:3.4. of the Code of Virginia, no fewer than seven and no more than 14 days prior to the scheduled meeting. DEQ has historically posted public notices in the classified/legal notice section of the newspaper. Due to rising costs, the print has gotten smaller overtime, but as this was brought to staff attention, policy is being modified to use larger print. The public notice for informational meetings is also posted on the DEQ website and Town Hall.

2. When a draft permit is prepared:

The regulations require that Public Notice of Draft permits be advertised twice within 2 weeks, in a newspaper of general circulation in the county in which the proposed biosolids activity will take place. The notice includes information regarding reviewing the draft permit, the 30 day comment period that follows the notice and how to request a public hearing, which will involve another public notice. This notice is also posted on the DEQ website and sent to the “notification list”

3. Prior to Land Application:

- a. Based on the statute, at least 100 days prior to commencing land application of sewage sludge at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the chief executive officer or his designee for the local government where the site is located. The 100 day notice is primarily a tool to make the county aware that a new site is being authorized to receive biosolids. DEQ has amended the regulation, based on TAC discussion, to clarify that DEQ’s initial notice to the county upon receipt of a permit application may fulfill the requirement “cause to be delivered written notification” if the notification includes all the necessary site information. Because the permitting process may take up to 180 days from the receipt of a complete permit application, notice to the county will likely be more than 100 days prior to application.
- b. The statute also requires that the permittee will deliver or cause to be delivered written notification to DEQ and the county at least 14 days prior to land application at a permitted site. By statute the notification must include only the location of the site and the expected source of biosolids. The regulation language proposed in December 2009 required that the permittee provide much

more detail. However DEQ has observed that due to many variables that are out of control of the permittees, such as weather, the farmer's operation schedule, etc., the permittee is not able to predict what sites will be suitable for land application 14 days in advance. As a result, the 14 day notices submitted to DEQ include many more sites than will be land applied, making that information of little use to the department. Therefore, DEQ proposes that only the statutory requirement remain in the regulation in regard to the 14 day notice. The detailed information required by the 14 day notice in the original amendment will be submitted to DEQ and the county when the signs are posted at the field, 5 days prior to commencing application activities. (See 3.c. below)

Based on TAC discussion and written comments stating that the counties did not have staff to receive these notifications, where the language says that notice will be given to the county, the following condition was added: "unless they (the locality) request in writing not to receive the notice."

- c. The proposed regulation requires that signs be posted 5 days prior to delivery of biosolids for land application on any permitted site, as opposed to 48 hours prior to the activity in the original regulation as it was transferred to DEQ. The amended language includes requirements for the signs to be located along road frontage of the field, in addition to the entrance and positioned so that they are visible from traffic in both directions along the road, rather than parallel to the fence line as noted in comments and previous complaints. These revised requirements are intended to increase visibility, as concerns regarding such were noted in the comments received. Based on discussions of the TAC, it was recommended that the minimum size and color of the signs not be changed due to the many local ordinances regarding the posting of signs. The original language "post a sign that substantially complies with this section" was struck in the proposed language.

In addition to the posting of signs, as noted above, DEQ is now proposing that the permittee notify DEQ and the county when the signs are posted. In that notification the permittee shall provide

- 1) The name, address and telephone number of the permit holder, including the name of a representative knowledgeable of the permit;
- 2) Identification by tax map number and the DEQ control number for sites on which land application is to take place;
- 3) The name or title, and telephone number of at least one individual designated by the permit holder to respond to questions and complaints related to the land application project;
- 4) The approximate dates on which land application is to begin and end at

the site; and

- 5) The name, address, and telephone number of the wastewater treatment facility, or facilities, from which the biosolids will originate, including the name or title of a representative of the treatment facility that is knowledgeable about the land application operation.
- d. The proposed regulation also requires daily notification to DEQ and the county, unless they request in writing not to receive the notice, of proposed land application activity prior to the activity beginning.

DEQ also received comments suggesting that notification prior to land application should include means other than signs. The signs are intended as a secondary notification to supplement the letters and newspaper notice that occurs at the time of permitting. DEQ recognizes that many land application sites currently in use were permitted under the VDH program which had a less extensive public involvement procedure when the permits were issued. To supplement the signage before land application, DEQ is also investigating options to provide notifications on the DEQ website of upcoming land application activity.

Some commenters also stated that the contact numbers on the signs should include a 24 hour number that does not forward to voice mail. While the land applier is not required to maintain a 24 hour response service, the DEQ does include an emergency response number after hours, which is maintained by an assigned agency representative who is paged if the number is called.

Other commenters noted that the signs should remain posted longer than 5 days after land application, to coincide with public access restrictions. The signs are not designed to communicate access restrictions; that is the responsibility of the landowner. The majority of land where biosolids is applied is private land where public access is prohibited in any case. If site-specific conditions exist at a proposed land application site that would invite public access (e.g. corn mazes), the DEQ could require additional signage, access restriction provisions or additional setbacks to address these individual circumstances.

SWCB Amendments - September 22, 2011 Board Meeting: Notification Procedures - Local Government and Citizens

During the State Water Control Board meeting, after hearing the department staff presentation and public comment, the Board discussed the timing of the signage required at the land application sites. The board expressed concern that the signs should remain in place for 30 days following land application of biosolids due to the 30 day site restriction and requested that staff add a statement to 9VAC25-31-485.F.1. and 9VAC25-32-515.B.1 requiring that signs not be intentionally removed for at least 30 days after the land application was complete. Department staff presented the following statement which was incorporated into both sections

identified above: The permit holder shall not remove the signs until at least 30 days after land application has been completed at the site. Language was also added to require that the landowner agreement include a statement that the landowner agrees to not remove notification signs placed by the permit holder..

Subject: [Nutrient Management Plans](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

If potassium deficiencies are not supplemented and/or pH levels adjusted to ensure that crop growth needs will be up taken by the crops, no further land applications shall be made on sites owned by the landowner(s) in question or on any other sites that have the same farm operator. In the event that these deficiencies occur repeatedly under a permit, the permit holder shall be prohibited from land applying any sewage sludge under the permit.

Contrary to the objectives and provisions of the Chesapeake Bay TMDL and associated documents, the proposed regulations would eliminate Section 600 A and rely on nutrient management plans to ensure that P is limited. However, to be consistent with the Code and the current Section 600 A, the regulations must also clearly state that DCR's preferred nutrient management method (limiting P to crop needs) must be the method used. Failure to do so would allow permit holders to apply considerable amounts of P in excess of crop needs and increase the burden on our other farmers for nutrient reduction. The regulations must include a requirement such as: The applied N and P content of sewage sludge shall not exceed the amounts of P established to support crop growth.

Commenter: Bates, J. Barry, representing Farmers

Would appreciate it if the Board could look into the phosphorus issues as it relates to the amount of carbon in the soils. It is important to be able to put organic matter back in the soil to help with this.

Commenter: Broaddus, John, representing Farmers

Biosolids break down slowly and provide much needed organic matter to our soils. Biosolids help to improve and maintain the mulch layer which prevents erosion by allowing the water to soak in and not run off; therefore keeping the soil and its nutrients in place and not washing to the Bay.

Commenter: Davis, Brandon P., representing Shenandoah County

Phosphorus assessments, limitations, and controls need to be strengthened. As an example of provisions contrary to the objectives and provisions of the Chesapeake Bay TMDL and associated documents, the proposed regulations would eliminate Section 600A and rely on nutrient management plans to ensure that phosphorus is limited. However, to be consistent with the Code and the current Section 600A, the regulations should also clearly state that DCR's

preferred nutrient management method (limiting phosphorus to crop needs) must be the method used. Failure to do so would allow permit holders to apply considerable amounts of phosphorus in excess of crop needs and increase the burden on our farmers for nutrient reduction. The regulations should include a requirement such as: "The applied nitrogen and phosphorus content of sewage sludge shall not exceed the amounts of phosphorus established to support crop growth. If potassium deficiencies are not supplemented and/or pH levels adjusted to ensure that crop growth needs will be up taken by the crops, no further land applications shall be made on sites owned by the landowner(s) in question or on any other sites that have the same farm operator. In the event that these deficiencies occur repeatedly under a permit, the permit holder shall be prohibited from land applying any sewage sludge under the permit."

Commenter: Evans, Kristen Hughes, representing Chesapeake Bay Foundation

CBF supports establishing threshold levels for pH and potassium content of the receiving soils as a requirement for biosolids application.

In light of a recent review of phosphorus site indices commissioned by the USDA Natural Resources Conservation Service which made several recommendations for ensuring phosphorus site indices are protective of water quality, CBF requests that the Virginia Department of Environmental Quality work with the Virginia Department of Conservation and Recreation to initiate an assessment of the phosphorus application criteria in the Virginia Nutrient Management Plan Standards and Criteria to ensure that phosphorus in biosolids and other fertilizer sources are being applied in a manner that does not cause or contribute to water quality impairments.

Commenter: Gardner, Don, representing Farmers

If the soil potassium levels are low, the regulations seem to indicate that the soil would have to be supplemented with potash and then allowed to remain fallow which would result in more soil erosion. The regulation should allow for the simultaneous application of potash and biosolids.

Commenter: Graf, Mary, representing Citizens

Phosphorus needs to be included with Nitrogen when gauging how much sludge can be applied. The regulation draft allows for routine overloading of P, which results in runoff into waterways and the Bay.

Phosphorus needs to be included with Nitrogen when gauging how much sludge can be applied. As it is now, there is routinely an overload of P, which then messes up waterways and the Bay.

Commenter: Hatcher, Roger, representing Farmers

Traditionally nitrogen has been used as the limiting nutrient for the application of biosolids and other manures. The proposed regulations propose to use phosphorus. Phosphorus behaves totally different from nitrogen in the soil. It does not take much phosphorus to reach a plant uptake limit. Soils will rapidly reach a saturation level is phosphorus is used for either biosolids or any other manure. This proposal needs to be reconsidered. The use of phosphorus is a deal breaker. A realistic approach is needed.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Allowing DCR's regulation to maintain control over the nutrient management plan aspects of the program is consistent with how other aspects of the program are governed. There has not been any demonstration of a need to impose heightened nutrient management plan requirements or limitations on biosolids. There should be one standard set of nutrient management plan requirements that applies to the land application of all organic substances. Given DCR's experience on nutrient management plans, the limits established in DCR's regulations should govern. There is no documentation supporting the need for DEQ to impose such requirements, nor would it make sense from a regulatory efficiency and certainty standpoint.

The Department of Conservation and Recreation (DCR) is charged with approving nutrient management plans that govern the application of biosolids for agricultural purposes. The DEQ permitting program for biosolids relies upon the nutrient management plan process to ensure that appropriate amounts of biosolids are being applied for certain crops. One of the goals of the proposed regulations was to provide consistency and clarity among the different agencies involved in reviewing and approving the required permits and plans. However, the language in the proposed regulation applies new standards to land application limits that are normally established through the nutrient management plan process. (9VAC25-31-505; 9VAC25-32-560 A & B). This does not make sense. If changes to the nutrient management plan processes are needed, they should be made to DCR's nutrient management plan regulations. It is impractical and confusing to have multiple sets of regulations that apply to the same activity. Moreover, there is no basis for singling out biosolids in this manner. The nutrient management plan requirements should be the same for all organic sources used for land application.

Commenter: Henderson, Jim, representing Citizens

The application rate of sewage sludge biosolids is based on nitrogen content irrespective of the phosphate content. As nitrogen is rather low compared to phosphate, this routinely results in an overload of phosphorus. This has a definite negative effect on runoff into the Chesapeake Bay. This actually runs counter to the new regulations on the Bay watershed. The added phosphorus can cause algae blooms which lowers the available oxygen in affected streams. The regulations must require phosphorus crop need as important a factor as nitrogen need. To continue to use nitrogen need as the sole gauge for application rate, ignoring the phosphorus need, blatantly ignores the mandate of the VA Code to protect the environment.

Commenter: Kelble, Jeff, representing Shenandoah & Potomac River Keepers

The proposed regulations must ensure that nutrient sources do not exceed crop needs. The Virginia Board of Health recognized the need to limit both phosphorus and nitrogen long ago when it adopted 9VAC25-32-600 A, which restricted the application of sewage sludge to the amounts actually established to support crop growth, i.e., if the soil had sufficient levels of nitrogen and phosphorus, then sewage sludge could not be applied to that land. The proposed regulations, however, would eliminate Section 600 A. This not only would violate statutory requirements to protect the environment, but also would be counter to current efforts in the Commonwealth to reduce the adverse impacts of phosphorus on the health of the Chesapeake Bay as mandated by the US EPA. Simply reinstating Section 600 A, however, is not enough: Section 600 A should be amended to make clear that the application of sewage sludge shall be

restricted based on both the phosphorus and nitrogen requirements of the crop grown on the amended site, not just the nitrogen requirements of the crop. This is consistent with other section of the Virginia Code, which provide that, "whenever possible, phosphorus applications from organic nutrient sources should not exceed crop needs based on a soil test over the duration of the crop rotation." It is critical to the environment and state waters that the proposed regulations ensure that excess phosphorus is not permitted to enter state waters. The best way of doing so, in this context, is to prohibit the application of phosphorus-rich sewage soils where no phosphorus is needed to support crop growth. Therefore, 9VAC25-32-600 A should be reinstated and amended as noted.

Commenter: Kelble, Jeff, representing Shenandoah Riverkeeper

Echo some of the environmental and health concerns noted in previous testimony. I have previously provided comments against approving of the Shenandoah Permit for the application of biosolids by Recyc Systems. As a society we need to recycle some of the components of sewage sludge. There are concerns about the phosphorus content of the soil and biosolids. The Shenandoah Valley is a hot spot for phosphorus issues. We have not managed phosphorus well. The proposed regulations do not provide a solution to the phosphorus issue. We should look for situations to reuse sludge, but should also be aware that there are some situations where it should not be used. It should not be applied in Karst terrain or flood plains.

Commenter: Land, Dr. Lynton S., representing Citizens

Any nutrient that is not sequestered in the harvested crop either accumulates in the soil or pollutes the environment by processes such as infiltration, runoff, volatilization, etc. There exist no other possibilities. The huge amounts of N and P disposed by the land application of animal waste are not all sequestered in the crop or retained in the soil, and therefore pollution is certain. There exists no science to support P disposal in excess of a realistic annual agronomic rate, as provided in "Standards". It is an undeniable scientific fact that any fertilizer applied at more than the annual agronomic rate increases pollution and "...any pollutant from such sewage sludge entering the navigable waters...is prohibited." The only reason for sanctioning higher P disposal rates then recommended in "Standards" is to protect the profits of special interests, to the detriment of water quality, the same reason that VDH proposed to use "biosolids" and not "sewage sludge".

Numerical limits have been established in DCR's Virginia Nutrient Management Standards and Criteria, Revised 2005 ("Standards") and these "numerical limitations" must be imposed to adhere to Federal law. In the case of phosphorus (P), according to Section V of "Standards", in no case should more than 120 pounds of P be applied per acre. Since the annual agronomic crop-removal rate for P is rarely more than about 40 pounds per acre, permitting as much as 120 pounds of P to be disposed annually is very lenient and would have no negative impact on crop productivity. According to "Standards", the allowable amount of P (as pounds of P₂O₅) disposed per acre is $120 - (2.18 * \text{ppm P})$ where "ppm P" is the Mehlich 1 soil test value. Disposal of P at higher rates, as allowed by the Phosphorus Index, by the recently revised Poultry Regulations, and by these proposed regulations is a blatant violation of the Clean Water Act. P-based land application, using the "numerical limits" in "Standards", is the only legal option for land application of animal waste.

The regulation should read 4VAC5-15-150.2.c.1 "Phosphorus applications in nutrient management plans shall not exceed crop nutrient needs over the crop rotation based on a soil test." There is absolutely no scientific reason to make a distinction between "inorganic" and "organic" forms of P, and the word "inorganic" should be deleted, so that all sources of P are applied so as "...not to exceed crop nutrient needs" as qualified in "Standards". "Standards" clearly states (p. 100 and 107) that the P₂O₅ nutrient availability for animal waste is equal to the P₂O₅ analysis. Unlike N, where only a fraction of the N in the animal waste (Tables 8-2 and 9-1) is assumed to be rapidly mineralized and therefore crop available (and almost all of the remainder causes pollution), all P in the waste is assumed to be crop available. The only reason the distinction is currently made between "inorganic" and "organic" P in animal waste is to promote cheap animal waste disposal to the detriment of water quality, and this distinction is not defensible from a scientific perspective.

Commenter: Lorien, Joy, representing Citizens

Sewage sludge and poultry litter are commonly touted as "free fertilizer". In fact, all forms of animal waste are highly inefficient forms of fertilization, guaranteeing considerable groundwater and surface water pollution. Approximately half the nitrogen in lime-stabilized sludge is not used by crops. Most of the nitrogen not consumed by crops will be oxidized to nitrate and enter the groundwater or contribute to runoff. The US Geological Survey estimates that half of the 50 billion gallons of water that reaches the Chesapeake Bay each day is groundwater, discharged underground directly to rivers and waterways. We know that groundwater today typically contains high concentrations of nitrate from agricultural and homeowner practices, so the excess nitrogen from the sludge constitutes additional pollution. Conventional fertilization minimizes the amount of fertilizer applied to times when it is used by the crop, thus reducing loss to the environment as much as possible. Animal waste fertilization, in stark contrast, is inefficient and results in extensive nitrogen pollution. All forms of animal waste are rich in phosphorus (P). Only small amounts of phosphorus enter the groundwater (unlike nitrogen), and most phosphorus pollution takes place as a result of runoff, especially if soil is lost. Most soils in the Chesapeake Bay watershed are already High or Very High in phosphorus according to soil tests, and already contain sufficient phosphorus to support crop growth. If VDH regulations were being enforced (12VAC5-585-550.A "The applied nitrogen and phosphorus content of biosolids shall be limited to amounts established to support crop growth.") sewage sludge could not be applied to most soils. Rates of land application are currently regulated, despite the law quoted above, only by the nitrogen needs of the crop. Most of the excess phosphorus added to the soil as a result of land application of animal wastes is not released to the groundwater as rapidly as is nitrogen, but "banking" phosphorus in the soil guarantees slow long-term releases and makes catastrophic loss of p-laden soil much more likely. Excess phosphorus in most Virginia soils makes Best Management Processes that prevent runoff from fields, and prevent soil from entering waterways, especially critical and in need of strict enforcement. Farmers who choose to use sewage sludge or poultry litter instead of conventional fertilizer must recognize the inefficiency of this form of fertilization and their role in exacerbating nutrient pollution of the Chesapeake Bay. They must recognize that their fields are being used as landfills to dispose of unwanted animal waste in the guise of "free fertilizer".

Commenter: Martin, Steve and Popie, representing Citizens

A nutrient management plan must be submitted with the application. This plan should be

updated to keep it current within 6 months. The regulations should allow the local monitor as well as DEQ to enforce compliance with the NMP as the sludge is applied.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

Need to have a Nutrient Management Plan filed with the application. The regulation should require a NMP with application and updated throughout the process. The NMP should be monitored to ensure compliance.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Because many soils in the Chesapeake Bay region contain very high concentrations of P due to long-term application of manure, chicken litter and commercial fertilizer, Dr. Evanylo recommends applying sludge at rates to meet the P needs of the crops. The proposed regulation should be revised to make that a requirement of the permit.

Commenter: Powell, Mary, representing Applicators

Additional regulations on nutrients are not necessary, they are already addressed in the nutrient management plan.

Commenter: Ritchie, Jason, representing Farmers

The proposed changes to the pH and phosphorus adjustments/requirements will adversely impact the use of biosolids and increase the amount of commercial fertilizers that we will need to use and will negatively affect my bottom line.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

The Department of Conservation and Recreation (DCR) is charged with approving nutrient management plans that govern the application of biosolids for agricultural purposes. The DEQ permitting program for biosolids relies upon the nutrient management plan process to ensure that appropriate amounts of biosolids are being applied for certain crops. One of the goals of the proposed regulations was to provide consistency and clarity among the different agencies involved in reviewing and approving the required permits and plans. However, the language in the proposed regulation applies new standards to land application limits that are normally established through the nutrient management plan process (9VAC25-31-505; 9VAC25-32-560 A and B). If changes to the nutrient management plan process are needed, they should be made to DCR's nutrient management plan regulations. It is impractical and confusing to have multiple sets of regulations that apply to the same activity. The nutrient management plan requirements should be the same for all organic sources used for land application. Allowing DCR's regulations to maintain control over the nutrient management plan aspects of the program is consistent with how other aspects of the program are governed. Given DCR's expertise on nutrient management plans, the limits established in DCR's regulation should govern. There is no documentation supporting the need for DEQ to impose such requirements, nor would it make sense from a regulatory efficiency standpoint.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Excessive phosphorus has long been recognized as harmful to the environment, with special adverse impact on the Chesapeake Bay. Limiting phosphorus applications to crop needs is not

only mandated by the Code and regulations; it is also a good recycling practice and DCR's preferred nutrient management practice. Enforcement of this practice would also reduce health and other environmental risks associated with land application by further diluting the sewage sludge constituents. The need to limit both phosphorus and nitrogen under the Code of Virginia was recognized long ago by the Virginia Board of Health when it adopted 9VAC25-32-600A. However, the draft regulations would eliminate Section 600 A of the current regulations and rely on nutrient management plans to ensure that phosphorus is limited. This would not only violate Code requirements and good recycling practices, but it would be counter to current efforts in the Commonwealth mandated by EPA to reduce the adverse impact of phosphorus on the health of the Chesapeake Bay. In order to comply with the Code, Section 600A must not only be part of the regulations, but all inconsistent language in the draft regulations must be eliminated. The regulations must also clearly state that Permit Holders must use DCR's preferred nutrient management plan, the plan that limits phosphorus to amounts needed for crop growth. Language such as the following must be incorporated into the regulations: "Notwithstanding any other provision, the applied nitrogen and phosphorus content of sewage sludge shall not exceed the amounts of phosphorus established to support crop growth. Permit Holders shall use DCR's preferred nutrient management plan, i.e., the plan that limits phosphorus to the amounts established to support crop growth. In the event that the amount of applied phosphorus exceeds crop needs more than three times under a permit, the Permit Holder is prohibited from land applying any sewage sludge under the permit."

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Although DEQ has the overall responsibility for regulating the state's biosolids generators and land applicators, the Department of Conservation and Recreation (DCR) also has an important role to play. By statute, DCR is charged with developing a voluntary training and certification program for nutrient management planners, establishing regulations that provide the criteria for agricultural NMPs, reviewing NMPs prior to permit issuance in certain circumstances, and assisting DEQ in the adoption of regulations. Despite the clear statutory delineation between DEQ and DCR's responsibilities, the proposed regulations include language that would effectively revise DCR's Standards and Criteria (S&C). Procedurally, VAMWA objects to revising DCR's regulations as part of this regulatory proceeding. More importantly, substantively, VAMWA objects to the changes proposed in the regulation with regard to soil phosphorus, pH, and potassium levels. VAMWA requests that DEQ strike this language as inappropriate and unreasonable.

The proposed regulations would require that a NMP be pre-approved by DCR before land application occurs if the soil exceeds a certain level of phosphorus as measured by a soil test. Such pre-approval reduces the flexibility of nutrient management plans, and complicates the farmer's ability to integrate biosolids application into his operations. DCR's current S&C already provides for extensive guidance on how to manage phosphorus under nutrient management plans. Pre-approval of the plans' content is not part of the S&C. Inserting it into the biosolids regulations appears to be an end run around following proper regulatory procedures to revise the DCR S&C. Neither DCR nor DEQ has cited any evidence that biosolids-based nutrient management planners are improperly following the current rules, which is presumably the reason for requiring pre-approval. Its inclusion in these regulations is

inappropriate and unnecessary.

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems is disappointed that the draft regulations has not eliminated all of the overlapping and contradictory requirements with other regulatory programs as currently exists in the biosolids use regulations. Instead new layers of requirements have been added. We encourage the Department to remove from their regulations requirements that are under the jurisdiction of other agencies and to resist adding additional layers of restrictions on that which is already regulated sufficiently by another agency. All requirements pertaining to nutrient management should be removed such that one set of requirements, the Department of Conservation and Recreation's regulations, are to be followed by the permit holder. Instead of creating a new form, the requirements for Financial Assurance should use the standard Certificate of Insurance used by the Virginia Bureau of Insurance.

Recyc Systems is opposed to the requirements for preapproval from DCR for Nutrient Management Plans beyond those as required in State Code. We note that this is not required of any other nutrient source and wonder why the use of biosolids is being targeted. If there is a problem in plans being written correctly, it would behoove DCR to administer their own program rather than burden the biosolids use regulations with another layer of requirements. Additionally, plans written at permit submittal quickly become obsolete and thus provide little benefit.

Commenter: Whitacre, Harold D., representing Farmers

I farm in Frederick County. I have used biosolids for quite a few years. It has been one of the most beneficial things that I have used on the farm. The nutrient requirements of the proposed regulations are set too high because of the lime content of the material. The phosphorus levels/requirements should be left up to the farmer.

Commenter: Wilkenson, Ricky, representing Farmers

Request that the proposed restriction of the application windows be removed from the proposed regulation. Weather and Mother Nature set the windows when application is appropriate. Need to keep the flexibility in the application window so that a farmer can react to the weather, especially during the rainy season.

DEQ Response to Comments: Nutrient Management Plans

Several commenters expressed concern about the methods by which nutrient management plans (NMPs) are used to define appropriate biosolids land application. The proposed regulation specifies that all biosolids application rates, application times and other site management operations will be restricted as specified in the approved biosolids management plan. The biosolids management plan must include a NMP as required by 9VAC25-32-410 and prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia. Some commenters expressed concern that the enforceability of the NMP was not clear. Language was added to the regulation that clearly specifies that the NMP is an enforceable part of the permit.

Some commenters suggested that the NMP should always be submitted at the time of permit application. Much of the information upon which the NMP is based is in fact submitted at the time of permit application; this includes site maps, soil maps and locations of environmentally sensitive features. These materials are important tools used by DEQ to evaluate site suitability prior to permitting. The NMP is assembled nearer to the time of land application so that actual crop conditions can be used in the development of the plan.

The NMPs must be written prior to land application and available for DEQ review at the application site. Within 30 days after land application has commenced, a copy of the plan is to be submitted to the farmer operator, DCR and the chief executive officer or designee for the local government, unless they request in writing not to receive the NMP. The 30 day time period is used to allow for any revisions to the plan based on actual source of biosolids and crop or management changes. The original proposed regulation also specified the final NMP must also be submitted to DEQ. This requirement was removed, as in most cases DEQ will review the NMP during the inspection, and can request a copy if necessary for further review. The most important recipient is the farmer operator, in order that appropriate decisions can be made regarding crop management using the nutrients supplied in the biosolids.

The Virginia Department of Conservation and Recreation (DCR) oversees the nutrient management program, as well as the regulations that prescribe content of NMPs and methods for determining appropriate application rates and timing. DEQ removed much language in the proposed regulation that prescribed NMP content, and some additional language based on public comment. Language specifying NMP content was in the regulation prior to the statutory requirement for a plan written according to DCR standards. The DCR standards provide the structure upon which a certified nutrient management planner prepares a plan.

In some cases, the NMP must be approved by DCR and submitted to DEQ at the time of permit application (higher application rates, more frequent application rates, NMPs for land owned or leased by the operator of a confined animal feeding operations, and mined or disturbed lands in reclamation projects). For cases where soils test high in phosphorus (which may increase the risk to adversely impact state waters), an approved NMP must be submitted to DEQ prior to land application, but not at the time of permit application.

Some commenters expressed concern that requirements to supplement potassium and lime under certain circumstances should not be included in the DEQ regulations, and that these were issues best addressed through the DCR standards and criteria. Commenters expressed particular concern stating that soil pH and potassium on newly cleared land would be low, and to wait to apply biosolids until pH and potassium levels were at higher levels would delay establishment of crops or cover on such fields. DEQ amended the language to state that when soil test potassium levels are less than 38 parts per million, the field must be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. When soil pH is less than 5.5, the field must be supplemented with lime at the recommended agronomic rate prior to or during biosolids land application. The only mandatory level of soil pH is when the biosolids cadmium concentration is greater than or equal to 21 mg/kg, and in these cases, the pH of the biosolids and soil must be at least 6.0 SU. DEQ did not remove the requirements for pH and potassium management entirely, as these issues are directly related to how biosolids

land application is managed. The appropriate rates of lime or potash are still addressed with the DCR regulations.

For the distribution and marketing of exceptional quality (EQ) biosolids, NMPs are not required when this material is distributed and marketed similar to commercial fertilizer or commercially available soil amendments. These cases include dry, pelletized material, which is sold at a cost to a farmer or fertilizer distributor, and could be mixed with other fertilizer materials to create a more balanced product. Other EQ materials include compost or soil mixes which would be used in potting mixes, amending soil or landscaping uses. The original proposed regulation included an exemption for NMPs intended to exclude these uses. Based on comment from persons currently marketing these types of materials, alternate language is proposed in the final regulation. This language retains the exemption for dry, pelletized material, but alters the language used to describe biosolids soil blends and composts. The exemption for these materials is based on intended use (land application on agricultural operations) rather than the moisture or carbon:nitrogen ratios in the material. A NMP would be required for land application of an EQ material that is produced as a dewatered cake. Such materials are not easily blended, would likely not be bagged for commercial sale, and would be land applied using a method very similar to that of a Class B material.

Subject: [Odors](#)

Commenter: Dixon, Bonnie, representing Madison County Residents

After considerable discussion about the need to exclude cattle from our streams to reduce pollution and emphasis on disposal of human waste in ways that reduce runoff, how can spreading sludge on farm lands make any sense at all? Popular activities include tourism, eating at local restaurants and outdoor interests such as fishing, hiking and painting the landscape. Surely the unpleasant odor of sludge would limit and curtail these pursuits effecting our quality of life and local economy. Surely better waste management solutions can be found that don't create more problems than they solve.

Commenter: Dunkley, Barry T., representing City of Danville

Buffers zones were never intended to address any odor concerns, they were originally designed to prevent any migration of materials from the applied site into surface waters. They were not established because of health concerns. Buffers were also established from wells and dwellings as a way to provide people with an additional level of comfort. The current buffers zones for occupied dwellings were developed by VDH as an administrative convenience. The existing buffers are adequate. The expansion of those buffers from 200 to 400 feet as proposed in the amendments would not provide any additional benefits and would be detrimental to farmers by reducing the amount of land receiving these valuable nutrients. Depending on the process biosolids may have little or no odor.

Commenter: Graf, Mary, representing Citizens

"Odor sensitive receptor" should not refer to a building, but rather to an individual or to

individuals in buildings, as was the original intent.

Commenter: Langholtz, Jan, representing Citizens

The choice of the right class of sludge is important, but I can testify that any class of sludge will ruin the summer for anyone within "smelling" distance.

Commenter: Martin, Edward, representing Citizens

I own three tracts of land in Bedford County, totaling about 400 acres. One is my home place, a working 164 acre farm. Most is rented, and two of the renters have asked if they could use sludge. My immediate, unequivocal answer was, "no, absolutely not, never." On the land next to one tract I own, the absentee owner allowed sludge to be spread. It has rendered my land, a beautiful 90-acre tract of timber with a nice, flowing stream - I recently enrolled the tract in the USDA's wildlife conservation program - virtually useless because of the stomach-wrenching stench. I have no idea what's washing into the stream, but I invite any sludge advocates to come and take a drink. I'm reasonably sure I will have no takers. I have known of several locations in Bedford County where sludge has been spread - one off Rt. 122, Moneta Highway, east of Bedford City, and another near Body Camp, off Shingle Block Road - where the surrounding property has been rendered absolutely unusable by humans. Allowing the big, northern cities to dump their human wastes on our state should be unthinkable. Anybody caught doing it or permitting it should be heavily fined and if necessary, jailed. Or worse, stake them out in the field where it's spread and make them live with the consequences.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

Many times farmers do not even remove their cattle from the sludged fields when application is applied.

The stench of the sludge lasts for months - not days. It causes headaches, nausea, and eye irritation. So much for a nice quiet place in the country where you barely walk out of your home without being assaulted by such foul stench that permeates everything. Of course, most of the time the applications are done during the summer. Many times farmers do not even remove their cattle from the sludged fields when application is applied.

Commenter: Quinley, Jill, representing Citizens

The biological, microbiological and chemical concerns are legion in the unresolved biosolids issue, but, the one area that seems to be overlooked is the impact biosolids have on Virginia's Tourism Industry. Virginia boasts "Virginia is for Lovers", but I question the lovers who are downwind from recently applied biosolids. The odors from these applications are beyond description. Environmental awareness has increased significantly over the past few decades, and, "dumps" of years by are now regulated and monitored landfills. Could it be with landfills reaching capacity, the solution is to "dump" above ground. Surely not!!

Commenter: Sensabaugh, Donna, representing Self

Every couple of years the owner of the pasture across the road from our home spreads biosolids and the stench is horrible - to the point it takes your breath away when you walk outside. Each year when he's done this our summer is spent inside - no sitting out on the porch,

no grilling, nothing. I know we're in the country - my husband and I both grew up in the country and don't mind the natural animal-produced smells but this is too much. I'd love to see DEQ require that the owner live adjacent to the property on which the biosolids are spread so they can have the same summer they inflict on us.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The draft regulations fail to ensure that odor sensitive individuals are addressed, or to address how to calculate the distance needed to protect them. Unless the regulations provide for the identification of such individuals, DEQ is required to assume that everyone in the vicinity not excluded as odor sensitive to be odor sensitive. That needs to be clearly stated as follows: "If DEQ has not reasonably confirmed that there are no odor sensitive individuals near any given site, all unincorporated sewage sludge applications are prohibited in the vicinity of any individuals who may be near permitted sites."

The regulations must ensure that Odor Sensitive Individuals are not exposed. Lawful land applications of sewage sludge are prohibited unless Odor Sensitive Individuals are protected. The General Assembly was aware that unincorporated sludge applications posed a greater quality of life concern for odor sensitive individuals. Thus unincorporated land applications near odor sensitive individuals are prohibited under the Code of Virginia. However, the Board has been directed to develop regulations specifying and providing for extended buffers to be employed for unincorporated land applications and allows DEQ to allow unincorporated land applications in the vicinity of odor sensitive individuals as an alternative to surface incorporation by using extended buffers to preclude exposure. Unfortunately the draft regulations fail to make clear that when extended buffers are not established to protect odor sensitive individuals, lawful unincorporated land application is prohibited where odor sensitive individuals could be exposed. This can be corrected with the following language: "All unincorporated sewage sludge applications in the vicinity of odor sensitive individuals is prohibited unless DEQ has established adequate buffers under § 62.1-44.19:30 to ensure that such odor sensitive individuals will not be exposed to odors from the sewage sludge."

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems has a general opposition to requirements which provide no benefit. We note that odors cannot be controlled by extended buffers and are best addressed by the Generator with improved management practices as required in the draft regulations.

Commenter: Turpin, Richard B., representing Citizens

Based on my experience I have two observations: First: Sludge/Biosolids was first spread on farmers fields in this area from the Roanoke sewage plant. This was a completely treated product which had no odor and no residual "bad" elements. Second: West Virginia would not allow sludge/biosolids to be used in any way where it could enter the human food chain when I was there (1976-1996). You have 3 different groups who want to influence your regulations to their benefits: First: Spreader Companies which must make a lot of money which they have used to lobby for laws in their favor. This needs to be corrected. Second: Farmers who think they are getting something cheap or free. if they find out "bad" stuff has been put on their million dollar farm they may have a million dollar liability. Third: Public thinks the smell is awful, the spreaders are reckless with their locating land, posting signs, tracking on roads, etc..

You must protect the public and establish the regulations to do so. I remember my professor at Va Tech in Sanitary Engineering: "If it stinks it ain't treated". What has been spread in my area of Bedford County stinks so it must not have been treated.

DEQ Response to Comments: Odors

DEQ concurs that there is an odor associated with biosolids land application activity. 9VAC25-32-520 and 9VAC25-32-610 set forth guidelines for sludge quality and composition and biosolids treatment. These guidelines establish the minimum treatment and sampling requirements for any biosolids source, and are designed to ensure that adequate treatment and stabilization occurs to reduce odors and pathogens. The Biosolids Expert Panel concluded that odor is a characteristic of biosolids that may affect adjacent property owners and recommended that permit holders utilize odor control plans. Requirements for such plans have been included in 9VAC25-31-100.Q. as listed below:

6. All applicants must submit an odor control plan which contains at minimum: a. Methods used to minimize odor in producing biosolids; b. Methods used to identify malodorous biosolids before land application (at the generating facility); c. Methods used to identify and abate malodorous biosolids that have been delivered to the field, prior to land application; and, d. Methods used to abate malodor from biosolids if land applied.

Subject: [Operations and Maintenance Manuals and Biosolids Management Plan](#)

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Calibration and maintenance of equipment are required elements of the Operation and Maintenance (O&M) Manual. Requiring this information as part of the permit application is not appropriate, as the information can change with the purchase of new equipment or with a new contractor. VAMWA requests that DEQ strike this language.

There are two different plans cited in the VPA regulations, a "biosolids operations plan" and an "operations management plan". Because "operations management plans" appears to be a subset of the "biosolids operation plans", VAMWA recommends that a single term be used for these plans to avoid confusion. VAMWA suggests that "biosolids operations plan" be used in 9VAC25-32-410 (states that permittee must maintain site books, NMPs, and an O&M manual as part of the operations management plan) and 9VAC25-32-560 (biosolids utilization methods).

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems urges the Department to review the regulations for redundancy. We note that requirements and content for the operation management plan is found in four sections with discrepancies. We also note that there is confusion in use of the term "operation management plan" and the "operations and maintenance manual".

DEQ Response to Comments: Operations and Maintenance Manuals and Biosolids Management Plan

The biosolids management plan is made up of 3 parts: 1) the information provided in the permit application (including site books); 2) the O&M manual; and 3) the nutrient management plans. Each component of the biosolids management plan is enforceable. In order to avoid confusion the name of the document has been changed from “Operations Management Plan” to “Biosolids Management Plan”. Section 9VAC25-31-485.G. of the VPDES regulation and section 9VAC25-32-410 of the VPA regulation specify the components of the biosolids management plan and required time of submission for each.

Subject: [Opposition to the Land Application of Biosolids](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

Shenandoah County - Permit Application (VPA-01579): Resolution passed by Shenandoah County Board of Supervisors noted the following concerns: The potential harm to human health and the environment from the land application of sewage sludge is not yet known, and there are numerous calls, including from the Virginia Department of Health, for further study of this potential harm; DEQ fails to demonstrate that health-sensitive individuals in the vicinity of sludge sites will be identified and protected from the unknown and untested constituents in the sewage sludge as required by regulations Code 62.1-44.19:3B; DEQ fails to adequately identify and exclude pollution sensitive sites (with appropriate buffers) including Karst terrain, areas that flood, highly erodible soils, rapid runoff soils, etc. to ensure that the environment is protected as required by regulations Code 62.1-44.19:3 B; DEQ soil sampling and agricultural processes and techniques are contrary to best management practices in that soil sampled of land on which sludge is applied may be up to three years old and phosphorus loads may significantly exceed the established needs of crops, as set forth in 9VAC-32-600 A; DEQ has made no attempt to establish a groundwater or surface water monitoring program for the Eastep property, and both of the potential permitted areas are situated in either Karst terrain, where there is direct interaction with surface activities, or in the floodplain where groundwater and surface water are exchanged; and The approval of the land application of imported sewage sludge is contrary to the efforts of the County, and other area stakeholders, to implement the Chesapeake Bay TMDL and watershed implementation planning area requirements to reduce pollutants, particularly phosphorus and nitrogen, entering the streams throughout the Chesapeake Bay watershed.

Commenter: Auckenthaler, Judy, representing Madison County Residents

I cringe just thinking that responsible farmers are considering sludge to fertilize their (our) lands with, and I might add, well water, streams, and anything or anyone living in or around said farmers. Sludge is filled with more than just sludge! Will the tourists stop visiting after smelling the NASTY sludge on their journey through an area? Suggest the farmers apply worm

casings! Economical and highly effective. Would you desire you or any of your children and families to be subjected to such heinous recycling of human excrement?

Commenter: Berry, Emma, representing Madison County Garden Club

Once heavy metals are deposited into the soil, they never dissipate, they are there for our grandchildren.

Commenter: Breeding, E. Neil and Barbara A., representing Madison County Residents

Municipal sludge may contain biomedical wastes that can condemn land, and even though we are not putting it on our farm, runoff from other farms in the area may make our land useless and not marketable. In addition, we came here to enjoy the beauty of Madison County, and the smell alone will make us sell our farm and move. Finally, this county already has a problem with runoff in streams and rivers that ultimately flow into the Chesapeake Bay being polluted with human and animal wastes. We ardently believe the proposal will only add to this problem.

Commenter: Cook, Joel, representing Self

I am disappointed with the Commonwealth of Virginia's response to companies such as Nutri-Blend offering their sludge to our Local farmers. I believe one of government's most important responsibilities is to guard the safety and health of its citizens. I do not believe that the Commonwealth of Virginia's policies concerning the spreading of sludge onto local farmer's fields is a responsible policy. Despite all of the rhetoric and mis-information campaigns that companies like Nutri-Blend spread across the country, like so much sludge, their "product", sludge is not a safe product to be used as a fertilizer on farmer's fields. I am urging you to change the rules regarding the application for applying sludge anywhere within the Commonwealth. Part of the problem with the present situation is that farmers who are struggling in a poor economy are vulnerable to the advances of companies like Nutri-Blend which offer cheap and seemingly easy solutions to their financial woes. As you know, the dumping into our waterways of the terrible collection of toxins and heavy metals that are integral to the makeup of sludge was banned in the late 1970's. For good reason. Sludge is poison to the environment, no matter how much or how well it is treated. Since the ban was enacted, all the large cities in America had to face a big problem of disposing of their waste products. Disposing the treated waste products of industrial pollution is certainly an enormous problem, but the present solution is no solution at all; spreading sludge on farmer's fields just creates more problems over a larger area. What was one the city's problem becomes a rural county's problem which are far less equipped financially to deal with such problems. My major concern is water quality. Perhaps it's partially a selfish concern on my part; I have well water on my property. Anything done to any land within miles of my home affect the water quality of me and my neighbors. Part of the stringent testing I am recommending to you is the testing of well water for anyone living or working within a mile of any land that have been treated with sludge. Yes all these recommendations can be costly, but twenty years from now, cleaning up decades of sludge pollution will cost an enormous fortune. These future problems can be avoided by enacting strict testing of all sludge that is being offered by companies like Nutri-Blend and the testing of water around areas where sludge has already been spread.

Commenter: Dickinson, Bob, representing Citizens

A biosolids by any other name - The spreading of sludge on farmers fields brings the following to mind: I am not a scientist, but intuitively, don't most of the creatures we share this planet with avoid fouling their own nest? If the ever increasing billions of humans persist in doing so, where will we live, much less those other mammals and birds and fishes? If this is the inevitable consequence of growth, then it's time we find an alternative to growth.

Commenter: Dixon, Bonnie, representing Madison County Residents

Popular activities include tourism, eating at local restaurants and outdoor interests such as fishing, hiking and painting the landscape. Surely the unpleasant odor of sludge would limit and curtail these pursuits effecting our quality of life and local economy. Surely better waste management solutions can be found that don't create more problems than they solve.

Commenter: Eisenberg, Jacquelyn and Eisenberg, Marvin, representing Madison County Residents

We are totally opposed to the application of sludge/biosolids to land in Virginia. We have seen no scientific evidence that this is safe for the land or the residents of the surrounding areas. We have seen much evidence that it causes illness and can have a negative effect to the land that it is applied to.

Commenter: Elliott, Judy, representing Citizens

The Clean Water Act defined sludge as a pollutant. Sludge should be used for power and energy. The idea of putting sludge on your land is an old idea. 60% of sludge comes from out of state. If this sludge is so valuable and useful, why don't these states keep it for their own use. Pennsylvania is first in taking sludge while Virginia is second. 54 counties have already spread sludge in Virginia. They give it to use for free. I am still waiting for the government to give me something for free.

Commenter: Farrar, Sr., Alfred T., representing Citizens

It appears inane to me that a discussion on the use of biosolids (_ _ _) would at all be necessary. My objections to it (_ _ _) use are as follows: 1. Eons of experience has precluded the use of human (_ _ _) for agriculture. 2. It is difficult if not impossible to clean products grown for food when exposed to (_ _ _). 3. The diseases spread by such exposure are unknown and unaffordable. 4. Sewage processing is negated by run-off from intentionally spread filth. 5. That practice makes clean-up of "The Bay" idle talk. 6. The defining of (_ _ _) as a "product" for commerce, seems to me to be the poorest possible judgment.

Commenter: Flynn, Barbara & Graham, Joseph, representing Madison County Residents

We strongly oppose the use of sludge in Virginia. We are no way near convinced that the sludge is safe to apply anywhere or that the government has the ability to be able to inspect and deem it safe. We have been misled by so much of what the government has told us in the past. All of this sludge will eventually go back into the earth and consequently into the food chain causing even more cases of e-coli and other diseases. In addition to the safety issue, the smell alone makes it unbearable to be around and lingers for an extremely long time. It will lessen property values; no one wants to buy a house near a "sludge farm".

Commenter: Foster, Ed, representing Citizens

I am here tonight to express my extreme disappointment and disgust with these new regulations. For over 2 years I have tried to work with DEQ to make my concerns known. At every turn I have been ignored, rebuffed and lied to. I was given excuses about why they couldn't do anything about my concerns. Their favorite answer was "wait until the new regs come out. Then we can do something." Clearly that was just a stall tactic. Very little has changes in these new regs and nothing will make a real difference has been included. It is clear that DEQ cares nothing about protecting public health and the environment. They are only concerned about keeping their jobs--at the expense of the welfare of the citizens. Money is at the root of this whole issue. A lot of people that I have talked with have the opinion that DEQ is being paid off by the sludge companies. That's the perceived explanation for why DEQ appears to work for them rather than the citizens of Virginia who pay their salaries. DEQ's sole purpose seems to be to see that sludge money keeps coming into the state coffers. In order to do that, they ignore state code and regulations. Why will these new regs be any different? They won't. They are USELESS!!!

In a letter from Neil Zahradka, he says DEQ exercises "enforcement discretion in all matters..." So what good are regs? We're all wasting our time here tonight and OUR taxpayer dollars. This proceeding is only a formality, a sham and holds no real meaning at all. So why am I here? I have one more suggestion on how best to improve these regs that I hope someone will have the ability to implement. My suggestion is quite simple and obvious. BAC SLUDGE. Use it for producing electricity and biofuel. Short of that, FIRE DEQ. Start at the top and work down. These people clearly care nothing about citizens' concerns--only about keeping their own high paying jobs. They are master spin-doctors who appear to be run by the sludge companies. We need good people who will fight for the citizens, not ones who only give us lip service and expect us to shut up and go away.

Commenter: Fowler, Jason, representing Self

EPA has released studies on biosolids which have determined the questionable nature of its safety and consistency and while this study did not lead to a conclusive moratorium on biosolids it has established, in my opinion, the need for a moratorium until a broader system of analysis can be created to test all sludge as each batch contains its own unique conglomeration of hazardous chemicals, contaminants, pathogens, hormones, heavy metals and other industrial toxins.

Commenter: Fox, Scott M., representing Madison County Residents

I am against spreading "sludge" on land. It is far too risky to go that route as once contaminants are placed in the ground, they will ultimately migrate either into the water table decades later, or into crops in the near term. Farmers love it because it is "free". Nothing is free. We will pay the price down the line. Please do not permit biosolids to be used for land application. One only has to catch a whiff of the stuff to know it is not any good for any of us.

Commenter: Fredke, Greg, representing Citizens

No Sludge! Let's not turn our town into a tonsillar stones!

Commenter: Grace, Mary, representing Madison County Residents

One local farmer, who has used sludge twice on his farm and supports the use of sludge

said, "it's getting rid of a substance that can be used by the general public instead of being a hazardous waste." So, if this farmer who actually uses this nasty stuff, because it is cheaper than other processed fertilizers, acknowledges sludge as a hazardous waste, why would I want it being absorbed into my tomatoes? We have toxins bombarding us from air and water and our food is increasingly tainted. Cancers are at epidemic levels. I believe that we need to go back to eating the locally grown, organic foods our great-grandparents grew. They did fine without sludge and chemicals, or shiploads of processed foods from the other side of the world. As a community, let's compost the food wastes at the schools/centers/churches and deliver these healthier wastes to our farms and gardens. With hopes for sane, environmental practices.

Commenter: Graf, Mary, representing Citizens

Discontinue land application - Land application of sewage sludge has never been proven to be safe. Sludge is a complex mixture spread under a pollution abatement permit. The regulations define pollutant as a material that "could, on the basis of information available to the board, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms". No wonder there is no proof of safety. "A Critical Review of the U.S. EPA's Risk Assessment for the Land Application of Sewage Sludge" is newly published, well-verified research by Jennifer M.J. Mathney of Boston University. Documented are the many errors made by EPA as the Part 503 Regulations were being established, such that "Part 503 cannot be counted on to be truly protective of human health and the environment." Some of the many mistakes made include using inaccurate data, using outdated exposure assessment methods with flawed assumptions, problems with regulated chemicals, and failure to perform follow-up studies recommended by the 1996 National Research Council (NRC) and the 2002 National Research Council (NRC). The 2002 Report found "no substantial reassessment has been done to determine whether the chemical or pathogen standards promulgated in 1993 are supported by current scientific data and risk-assessment methods." The report concluded that it was "not possible to conduct a risk assessment for biosolids at this time (or perhaps ever) that will lead to risk management strategies that will provide adequate health protection without some form of ongoing monitoring and surveillance." The Mathney report concludes, "Until the Part 503 standards are reevaluated using more current and reliable data and methods, the practice of land application must be discontinued because that is the only way to protect human health and the environment. The data strongly support that applying sewage sludge to land is not safe, and if things continue as they are, the long-term consequences to human health and the environment have yet to be felt."

I am against all permits for spreading pollution (so called biosolids) on farm lands, where it can be introduced into the food chain, and can contaminate water and air.

Commenter: Halligan, Dorothy, representing Citizens

When is Virginia going to step up and work shoulder to shoulder with neighboring states and start protecting our water? The following characteristics make this regulation irresponsible: the land is in a floodplain and its porous rock will flush sludge into the river; a children's corn maze is located nearby; the site is near a historic bridge and a heavily used river access point. The State of Virginia has rubber-stamped the use of sewage sludge on this site, indicating that

our state legislators will not protect our water supply from pollution unless the citizens hold them accountable. This is why I have become involved in the fight to change this regulation. We have the right and the responsibility to demand that our State officials protect our water supply. Listen Virginia legislators. "No Way!" is my response to regulating and allowing sewage sludge to enter our waterways.

Commenter: Harris, Martin, representing Self

I am a concerned Virginia landowner and have been monitoring the controversial Sludge application issue since it reared its ugly head many years ago. If there is one thing that I know and trust concerning this issue and all the propaganda your office and Sludge opportunists promote, is that the overwhelming majority of residents and landowners impacted by the proposed land applications, who are even knowledgeable of it, are adamantly against it. Yet, it continues to be forced upon citizens of Virginia to live with and accept as safe and beneficial. In today's environmentally sensitive world, it does not take a Virginia Department of Environmental Quality (which is a misnomer) bureaucrat to figure out that any land use issue such as Sludge application that draws so much attention, requires so much oversight and procedures, etc., etc., must inherently be dangerous to the immediate and extended environments. And, to make matters worse, during these tough economic times, I have no confidence in your office's ability to adequately oversee compliance issues due to current and inevitable budget cuts. If the DEQ/VA is not committed to standing against the continued use of Sludge applications, I can honestly say that it disgusts me that my tax payers dollars are being used to help pay the DEQ/VA to oversee the "quality" of our environment.

Commenter: Hart, George and Sharon, representing Madison County Residents

Numerous reviews of the risk assessment used to establish the standards for Land application of Biosolids have found serious flaws with the way EPA conducted the risk assessment. Current policies and regulations do not adequately protect human health and the environment. If the practice of land application is not stopped, the consequences to humans and the environment will be severe and long-lasting. The recent studies on the composition of chemicals in biosolids show the fundamental problem with sewage sludge: it is a complex always-changing mixture. Even if major changes were made to the standards, there are too many variables and unknowns regarding the amounts, behaviors, and toxicity of thousands of chemicals that are found in sewage sludge to regularly ensure the protection of human health and the environment. The federal Clean Water Act defines sewage sludge as a pollutant, and it needs to be treated as one. It is not a fertilizer with soil-conditioning properties. The data strongly support that applying sewage sludge to land is not safe, and if things continue as they are, the long-term consequences to human health and the environment have yet to be felt. Please, please do not allow the application of the toxic mix of compounds to be applied to our precious "food growing land" and the grazing fields for animals from which we get milk and dairy products. The agencies job is to protect public health, and allowing this process to continue is not doing so.

Commenter: Hassan, Khalil, representing Citizens

I completely support the comments of those who are either out rightly opposed to sludge applications or who urge extreme caution. I especially agree with Dave Gibson and Diane Parker, both are right on point.

Commenter: Henderson, Roger & Bev, representing Hurricane Hill Event Facility - Bedford

Since the legislation is not going to outlaw the spreading of biosolids in Virginia, we urge DEQ to crack down on testing the content of EVERY truckload that is spread - random checks are totally inadequate!!! We would appreciate hearing back from you as to what new regulations are proposed/approved.

Commenter: Hoffman, Carl, representing Citizens

Please use common sense and all the data available to stop the plan to put sewage into our (the public's) streams.

Commenter: Holley, Karen, representing Citizens

Sludge - I cannot believe that you are considering dumping sludge anywhere near the Shenandoah River. This river is already on the endangered list. Besides, there is a children's maze nearby and a bed and breakfast. This is an area that is frequented by fishermen and families. Many of the fish have been killed by runoff from chicken farms already. Do you have to make it worse. I thought that you are responsible for saving our waterways not destroying them! Please reconsider.

Commenter: Johnson, Cynthia, representing Madison County Residents

Please do not spread sludge. It is unhealthy stuff. You have no idea what could be in there. Not safe. Not good. Please don't do it.

Commenter: Johnson-Smith, Kimberley, representing Madison County Residents

I am opposed to the application of any sewage sludges. There is no way there can be certification as to the content of the specific sludge and consequently the potential impact on human and animal health, not to mention water quality through run-off or leaching, cannot be adequately assessed. We are on a course of pure folly - one that is having, from the serious research I've read since 1992, a tremendously adverse effect on our people, animals, water and soils.

Commenter: Lorien, Joy, representing Citizens

Myth: Only a vocal uneducated minority questions the current sludge policies. Fact: The National Academy of Sciences is hardly uneducated. Neither are internationally renowned soil scientists of the Cornell Waste Management Institute. The National Farmers Union opposes the use of sludge for farming, as do grassroots environmental organizations across the nation. Food processing companies such as Heinz and Monsanto will not accept produce grown of sludged land.

Commenter: Kipps, Elizabeth Frayser, representing Madison County Residents

I am very much opposed to the land application of biosolids. The content of treated biosolids from septic systems is unknown. The land is being contaminated in unknown ways. It is my opinion that the spreading of biosolids is terribly irresponsible.

Commenter: Knight, Edward, representing Citizens

This is insanity. Over the last few years, documented fish kills on the Shenandoah, Jackson and James Rivers, to name a few, have been tied to the increased use of sludge as a fertilizer on watersheds in these rivers. If the increased pollution generated by runoff from these treated areas is killing fish, what else is it doing to the users downstream? This is not using sludge as fertilizer, it is using rivers as waste disposal dumps. Your agency is charged with protecting rivers, and the environment as a whole, not protecting the financial interest of a few well connected industrial chicken farmers. To even consider loosening the standards, weak as they are, borders on the criminal. These standards should be tightened to the point that the industrial farmer should be required to dispose of the waste in a safe, non-polluting, non-health endangering manner, and this disposal cost should be borne by those who generate the waste, as a cost of doing business. It is time that political considerations are put aside and common sense is applied to the use of our Commonwealth's waters, lands, and air. I hope that you will agree that sludge is a problem that does not need to be visited upon our waters, not a solution for a few politically well connected businessmen.

Commenter: Krause, Pam and Bob, representing Madison County Residents
Please discourage dumping of biosolids in Madison County.

Commenter: Kreis, Delano, representing Citizens

There should be no sludge applied to lands that support any kind of crop whether animal or vegetable. There is simply inadequate testing and oversight. There are too many anecdotal events, ailments and problems associated with sludge to ignore. Please do not allow sludge to be used by any one for any reason at this time.

Commenter: Kreis, Delano, representing Madison County Residents

I am very opposed to the application of sludge on farmlands. Not enough testing has been done to ensure the safety of its use but there is a good deal of evidence to show that it is not safe. Please reconsider the use of sludge on any land anywhere.

Commenter: Layne, Bill, representing Citizens

Our governing bodies and the EPA are inconsistent and unreasonable. On one hand you want to clean up the Chesapeake Bay, and on the other you advocate spreading toxic sludge on our land. Sludge has not yet been proven to be safe to people, animals, the environment, or the Bay. Most reasonable, thinking people would like to see sludge use on farmland outlawed completely. But until then, I agree that we need more rigid testing and monitoring and wider buffer zones for people who own land or live near being sludged.

Commenter: Lorien, Joy, representing Citizens

Myth: Sludge farming is a sustainable practice. You can use sludge forever. Fact: The few European countries that still use sludge have much stricter regulations to protect agricultural soil. The US lets toxic materials accumulate in soils, until there is a 50% yield reduction. By then, farms have been turned into low-level waste dumps. We know of NO published scientific study that indicates that using sludge on farmland or forests is safe or sustainable.

When government fails to protect - waste management corporations reap massive profits from hauling and spreading sludge on farmland.

Commenter: Lorien, Joy, representing Madison County Residents

Crigersville resident Khalil Hassan, a longtime outspoken opponent to the spreading sludge says: "I think it is a bad idea. It is a product that had been forced on the agricultural community. It lacks a scientific base to declare it to be safe. I have yet to find a document that declares that. You really don't know what is in it, if it hasn't been inspected. It is not safe to dump into the ocean, why should it be safe to be introduced into the food chain?"

Commenter: Martin, Edward, representing Citizens

I have known of several locations in Bedford County where sludge has been spread - one off Rt. 122, Moneta Highway, east of Bedford City, and another near Body Camp, off Shingle Block Road - where the surrounding property has been rendered absolutely unusable by humans. Allowing the big, northern cities to dump their human wastes on our state should be unthinkable. Anybody caught doing it or permitting it should be heavily fined and if necessary, jailed. Or worse, stake them out in the field where it's spread and make them live with the consequences.

Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

Poisoning the land for future generations is a poor approach to successful, sustainable agriculture. If we don't responsibly take care of what we have, we will soon have nothing and be unable to compete in the marketplace effectively. With the organic food movement being the most rapidly growing food segment, farmers would be wise to pay attention to upcoming future trends and understand where their real future lies. But for most, it is too easy to fall back on "this is the way we've always done it." And they wonder why they can't get anything for their cattle at auction and their margins for profit are extremely slim. I would strongly urge you to reconsider allowing sludge throughout Madison County and instead promote more sustainable farming methods with healthier results.

Commenter: McLoughlin, Dr. David & Carol, representing Citizens

I am writing in opposition to the new regulations on the spreading of biosolids. There is no current evidence that biosolids are safe. They clearly may contain Pb, Hg, Co, and other elements that are hazardous to human health. Further, they may contain unacceptable levels of unsafe chemicals that can eventually contaminate our water supply or enter the food chain. We are spending millions to clean up the Chesapeake Bay and this will simply be undermined by the runoff of biosolids, particularly the nitrogen. We run the risk of huge environmental damage as biosolids use increase - as it will - if your regulations become effective. The only answer to this potential threat is no spreading of biosolids at all. We strongly support that position.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

I would echo the comments made by Ms. Hughes, Mr. Atwood, and Ms. Gessner. The revised regulations do not address or alleviate our concerns which remain (1) the largely unknown content of the sludge, (2) application of sludge to geologically and ecologically vulnerable sites, and (3) insufficient requirements in the regulations to protect the environment or human health. We object to the revised regulations because they do not address the failure of

the existing regulations to protect the environment both for humans and wildlife. Therefore, we look forward to DEQ publishing revised regulations that protect the environment from land application of sewage sludge.

Commenter: Moser, John, representing Old Dominion Smallmouth Club

No sludge, please. I am a life-long user of Virginia's waterways. I am encouraged by the improvements I've seen in water quality since the enactment of clean air and clean water legislation in my youth. Today, thanks largely to smart environmental policy decisions made about 40 years ago, river environments are surging back to health. But in the current political environment, the gains of the last 40 years are eroding. When I see legislation that changes the word "sludge" to "biosolids", I smell a linguistic cover-up. Let's face it, we are talking about putting sewage almost directly into waterways and calling it "biosolids". Other commenters have done a much better job than I can of exposing the differences between humans' historical use of sewage as fertilizer and the current use of "sludge" that contains a poisonous package of pollutants. Please heed these warnings. Sewage sludge is not going to crash our economy or irradiate our population, but this sludge is clearly dangerous stuff. Please do not trust to a regulatory process and corporations motivated by profit to manage this. Please keep sewage sludge out of our waterways.

Commenter: Musick, H. Glen, representing Citizens

I wish to speak against the land application of the material known as biosolids/sludge. We here in Virginia are in the process of hopefully cleaning up our Chesapeake Bay. Why would we apply a material to our clean pristine farm land defined as a pollutant in the first place. Everything flows down hill and at some point will find its way to the very source that we are trying to clean up - "The Chesapeake Bay". The studies performed are heavily slanted in favor of big industry. If this material were type A in lieu of type B, I would have a different view of this application.

We here in Virginia are in the process of hopefully cleaning up our Chesapeake Bay. Why would we apply a material to our clean pristine farm land defined as a pollutant in the first place. Everything flows down hill and at some point will find its way to the very source that we are trying to clean up - "The Chesapeake Bay". The studies performed are heavily slanted in favor of big industry. If this material were type A in lieu of type B, I would have a different view of this application.

Commenter: Myers, Mark, representing Potomac River Smallmouth Club

Use common sense - seconding Mr. Pfothenauer's comments. Please use common sense and protect our water.

Commenter: O'Bay, Robert C., representing Citizens

I would vote against any biosolids being dumped anywhere close to residential areas or anywhere there is wildlife that could be effected. Hopefully in the future the taxpayers of this County can ensure that this type of waste is prohibited from being dumped here or anywhere in the Commonwealth of Virginia.

Commenter: Overbey, Jo, representing Citizens

I first became interested in sludge/biosolids in late 2006 when I learned that NutriBlend had applied for a permit to spread nearly 3600 acres in Campbell. At that time, I decided to learn more about sludge/biosolids, what was in it and how it affected health and the environment. I began to research it intensively, reading everything I could find online about it, both from industry sources and independent sources. Ultimately, I came to the conclusion that sewage sludge/biosolids is a pollutant and should be handled with extreme caution. I was not alone in this assessment. A large number of citizens also made known their strong objections to sludge/biosolids being spread in Campbell County. I continued to be very interested in the subject, to the point of attending all but one of the Expert Biosolids Panel meetings, including their working meetings. When DEQ called for people to serve on the Technical Advisory Committee to amend the regulations, I agreed to serve as a Citizen's Representative. There were only 3 of us, with the remaining 13 members coming from the industry or related industries. Although we tried hard, we had little impact on the proposed amendments.

I have found recent information that supports stopping the practice of spreading biosolids on agricultural lands. The report; "A Critical Review of the U.S. EPA's Risk Assessment for the Land Application of Sewage Sludge" by Jennifer M.J. Mathney found that: "Sewage sludge is a complex mixture of inorganic and organic materials and pathogens generated by the treatment of domestic sewage. Section 40 of the Code of Federal Regulations Part 503 regulates the land application of sewage sludge based on pathogen content and sets standards for nine organic chemicals. It is believed that the Part 503 standards are protective of human health and the environment and that sewage sludge applied to the land posed little risks. A critical inspection of the pertinent literature, however, reveals that the standards are based on outdated methods, outdated data, inaccurate data, and flawed assumptions, leading to underestimation of risk. The standards are not sufficiently protective, and even if changes were made, sewage sludge is so complex that it is very unlikely it could be monitored to ensure the protection of human health and the environment. For these reasons, the practice of land application of sewage sludge must be discontinued."

Commenter: Paine, George, representing Northern Virginia Chapter of Trout Unlimited

Biosolids in the Shenandoah/Potomac Drainage: Please don't allow any more fecal waste, human or otherwise in one of the best fisheries in the Eastern US. There is already too much flowing off fields and out of obsolete treatment plants.

Commenter: Pedersen, Deverell, representing Madison County Residents

I am concerned with allowing sludge treatment of agricultural fields. Without the requisite testing for pharmaceutical, industrial chemical and heavy metal residues that would render such treatment obviously illegal, unsafe and horribly immoral, we cannot ascertain whether we are committing our children's only hope for the future to the landfill for short term benefit of a few bucks saved. Public concern is not being weighed. To poison our soil is to poison our children. For, in a few years' time, they will have nothing left but what they can grow and this too shall be taken from them. Please help us find a way to stop this insanity.

Commenter: Perry, Walter and Elizabeth, representing Madison County Residents

I live in the Chesapeake Bay Watershed. The EPA and the State of VA are about to force regulations on us that will cost us huge amounts of money to protect and clean up the Bay,

including restrictions on fertilizer use and runoffs, etc. "Fine" but don't ask me to pay more for Bay cleanup when the EPA and State allows these sludge companies to pollute the farm land and the consequential runoff that affects the Bay. This whole set up smells of politics and payoffs. Government has to wake up and stop allowing this to go on. This sludge program is a joke.

Commenter: Pfothenauer, Peter, representing Shenandoah River Keeper

Cats learn to use a litter box. Dogs can be house broken, and we potty train our children. So why would the State of Virginia basically allow big business to take a poop in our drinking water? If you pulled your drinking water from a pond at the bottom of a hill, would you build your outhouse on the slope above it. Virginia must take steps to better regulate the application of products such as biosludge. Maybe a first step is to call it what it really is: processed poop. If Virginia gains a reputation for deliberately allowing biosludge or other unsavory sounding products to filter into our rivers, the message will damage our economy as people choose to travel to other destination to fish, costing us sales tax revenues and restaurants and hotels income.

Commenter: Potter, Lorraine, representing Citizens

Sludge is not safe. A series of reports by the EPA's inspector general and the National Academy of Sciences between 1996 and 2002 faulted the adequacy of the science behind the EPA's 1993 regulations on sludge. Epidemiological studies have never been done to show whether spreading sludge on land is safe. Researchers link increased risk of illness to sewage sludge used as fertilizer. Burning eyes, burning lungs, skin rashes and other symptoms of illness have been found in a study of residents living near land fertilized with Class B biosolids, a byproduct of the human waste treatment process. In the British Medical Journal, BMC Public Health - July, 2002, researchers (Lewis and Gattie) reported that affected residents lived within approximately one kilometer (0.6 miles) of land application sites and generally complained of irritation after exposure to winds blowing from treated fields. When approving sludge for use as a fertilizer, EPA looked at chemical and pathogen risks separately without considering that certain chemicals could increase the risk of infection. Chemicals such as lime, which is added during sludge processing, can irritate the skin and respiratory tract and make people more susceptible to infection. Though modern treatment can eliminate more than 95 percent of the pathogens, enough remain in the concentrated Class B sludge leaving treatment plants to pose a health risks, according to Lewis and Gattie. The NAS report entitled "Biosolids Applied to the Land: Advancing Standards and Practices" reports that certain types of exposure, such as inhalation of sludge particles, "were not adequately evaluated" previously and no work has been done on the risks from mixtures of pathogens and chemicals found in sludge.

Commenter: Price, Jennifer, representing Madison County Residents

Please, No sludge in Madison, Virginia!

Commenter: Regnery, Audrey, representing Madison County Residents

I am not at all happy that anyone would use sludge on their property. Personally I feel that it is a hazard and I am not the only one that thinks this. I know it is a danger and it will spread diseases.

Commenter: Richards, Pam, representing Madison County Residents

The negative impact of spreading sludge on land; especially to our streams and creeks would be devastating. Please stop this practice. Please protect our environment and our watersheds. This is not a "safe" practice. It is up to use to protect the environment and our precious resources.

Commenter: Richardson, Rebecca, representing Self

Spreading biosolids is inconsistent with the goal to clean up our waterways. Farmers are paid thousands of dollars to keep their cattle out of their streams to protect the Chesapeake Bay. I saw biosolids being spread on a slope in Amherst Co. in a heavy rain. If it has to be would turning under the sludge help prevent the runoff? What about the groundwater? I vote no to biosolids.

Commenter: Schuchart, Bob, representing Ebb Tide Beach Community on Mattox Creek - Westmoreland County

Concern has been the overwhelming account of sludge (liquid and solid) that has been dumped on the farms adjacent to our community. In past years, sludge has been put on fields that are within 100 feet of residences. Fortunately, for reasons unknown in the last two years, the adjacent farms have not been able to get the free sludge. With so much emphasis on striving to maintain clean water in the Potomac and Rappahannock rivers and ultimately the Chesapeake Bay, it doesn't cease to amaze me that the county and state allows the dumping of this sludge in areas that drain directly into the rivers. A newspaper article defined Class A sludge as having nearly all disease-causing organisms eliminated as Class B as having less restrictive processing standards. In addition to fouling the rivers and ponds, the sludge dumping has become a public nuisance due to the following: terrible odors that pollute the air in the neighborhood, high truck traffic through our community, destruction of the county road system which needs repair after every sludge dumping season, and sludge dust remaining on roads from the truck traffic which may be hazardous to inhale. We hope that action can be taken to permanently eliminate sludge distribution in the Northern Neck for the sake of clean water; and the health, safety, and well being of our community.

Commenter: Shirley, Alexandra, representing Madison County Residents

I am totally against the spreading of sludge in Madison County.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Accurate relevant information to everyone potentially affected by land-applied sewage sludge is critical to any successful permit program. The draft regulations fail to meet that requirement at every level. No one is left out, including, sludge generators, sludge applicators, local governments, local residents, individuals in the vicinity of land application sites, environmental groups, health professionals, Virginia Delegates and Senators, other state agencies, and so on. The wrongful substitution of the word biosolids developed by the sludge industry for the Code mandated words, sewage sludge, is an important element of the inadequate and/or misleading information that permeates the draft regulations and DEQ' current policies and practices. The failure to ensure adequate and accurate information about the risks and responsibilities to landowners approached for the use of their land to dispose of this waste begins this process. Individuals in the vicinity of proposed sites are targeted next, beginning

with Public Notice of Meetings and Hearings that fail to mention sewage sludge, and fail to note the potential risks to health and the environment when sewage sludge is land-applied. Even the Public Notice for hearings on these proposed regulation changes is entitled "Public Notice - Environmental Regulations" rather than "Public Notice-Environmental and Health Regulations When Sewage Sludge is Land Applied." Nor are potential victims subsequently put on notice of those risks so that they may seek reasonable protection through DEQ, local governments, their family physicians, and family and friends (if they are forced to take themselves out of harm's way because of DEQ's failure to ensure protection of health.

Commenter: Tumblin, Larry, representing Citizens

Please help keep sludge out of our rivers we fish in it play in it and use the water to drink. Do you want to drink water from sludge? Please do the right thing and keep it out. Thanks.

Commenter: Warren, Lisa, representing Madison County Residents

Sludging (the use of biosolids as fertilizer) represents a significant step backward. Analysis and regulation of the contaminants inherent in sludge from municipal sewage treatment plants is nowhere near what it should be. Therefore, the fact that the use of sludge is sanctioned by the EPA, the USDA, and/or any other federal agency does NOT satisfy me. While I understand the attractiveness to some farmers of sludge as cheap fertilizer, I honestly think that if they understood how little is known about the make-up of the stuff and the potential hazards to their own health and that of their families, animals, land, and communities, they would not be willing to use it. Unless or until it's possible to analyze and test sewage sludge fully -- not just for a dozen contaminants, but for the thousands that it contains -- and to eliminate toxic or hazardous elements from the mix -- biosolids are unacceptable for use in areas where people or animals could possibly be affected by contaminants in the soil, the water, or the air. I believe that our country's and our county's brightest hope for the future lies in sustainable agriculture, and that sludge, as it is available and being promoted for use today, does not have a place in a sustainably managed agricultural environment.

DEQ Response to Comments: Opposition to the Land Application of Biosolids

The DEQ acknowledges the information provided by commenters who are opposed to the land application of biosolids. At the present time, the land application of biosolids is authorized by § 62.1-44.19:3 of the Code of Virginia. DEQ is tasked with supporting this environmental law by developing, amending and implementing the regulations governing the use of biosolids in Virginia.

Subject: [Proposed Regulations are not Protective; Not in Accordance with Statute](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

We find the proposed revised regulations inadequate to address our concerns regarding specific permits and the biosolids program in general.

Commenter: Graf, Mary, representing Citizens

According to VA Code, DEQ must protect human and environmental health. Present and proposed regulations do not. Therefore, any permit issued under them cannot be protective and will not conform to VA Code.

Here in Virginia, we are a Dillon Rule state with little or no say in local matters deemed to be governed by the state. We depend more than most states on our government and its agencies for our protections. Our individual rights are curtailed and we are, as it were, at the mercy of those in Richmond. Not a comfortable position for most. Land application of sewage sludge is not a sustainable practice and needs to be stopped. Short of that, we are asking that you ensure that the program is run as prescribed in the Code of VA; in a manner that protects health and the environment. Without local say, the DEQ and the Water Control Board have an added responsibility to provide adequate protection for our rights to clean water, unpolluted soil and air, and an environment that promotes human health, or at a bare minimum, does not harm it. The proposed DEQ regulations do not adequately protect human health. DEQ is not satisfying its statutory obligation in the proposed Sewage Sludge Regulations. Without substantial changes, it would not be legally defensible for the Water Control Board to pass these regulations.

The "Voucher system" used for documentation and recordkeeping needs to either be handled by a third party, or annually audited by a third party.

Commenter: Hughes, Charlotte, representing Citizens

For 14 years I have worked with other citizens as we have tried to convince DEQ, VDH, The Board of Health, and the State Water Control Board to correct serious deficiencies in sewage sludge regulations, policies and practices. We have been largely unsuccessful. During the Recyc Systems application for Shenandoah County, Chairman Miles made quite clear that DEQ's regulations would be amended to address existing regulation limitations that the Board believed made it impossible to reject the application as written. The Board inserted language into the Recyc permit that ensured incorporation of new regulatory language into the permit. It is very difficult to work through the proposed regulations and come out with a clear understanding of the changes. It is clear that the needed changes requested by citizens are simply not to be found. Unless those changes are made, the Board's commitment will be moot. When will DEQ submit to the Board for approval the needed changes so they can be adopted by the Board? It is important that someone communicate that information to those of us who have worked so hard to convince DEQ independently to address those important issues when the regulations were initially drafted.

Commenter: Kelble, Jeff, representing Shenandoah & Potomac River Keepers

To the extent that Mr. Sligh's comments support and compliment Riverkeeper's position we hereby incorporate those comments by reference.

To the extent that Mr. Staudinger's comments support and compliment Riverkeeper's position we hereby incorporate those comments by reference.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ should require all the spreaders of sewage sludge to file a remediation plan on how they would clean up any toxin which is found by DEQ or EPA to be harmful to health.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Although we recognize the need to dispose of treated sewage sludge and that land application may be appropriate under some circumstances, we are concerned that the proposed regulations do not adequately protect the environment and natural resources of the Commonwealth. Specifically, the revised regulations do not adequately address (1) the largely unknown content of the sludge, (2) application to geologically vulnerable sites, and (3) insufficient permit requirements to ensure the protection of the environment or human health.

Commenter: Overbey, Jo, representing Citizens

Sewage sludge is a mixture of many harmful constituents. In Virginia, land application is prohibited by statute, except in compliance with a valid VPA permit issued by the SWCB (§ 62.1-44-19:3). Thus if a permit is issued by the Board that is not valid, the statutory prohibition remains in effect: Permittees are prohibited from land applying sewage sludge there under, Generators are prohibited from allowing their sewage sludge to be land applied, and Landowners are prohibited from allowing the sewage sludge to be disposed of on their property. It is submitted that the Board does not have the ability to issue a valid permit to allow NutriBlend to lawfully land apply any sewage sludge in the Commonwealth of Virginia; and further, that if a permit were issued by the Board, NutriBlend would be prohibited by statute from land applying any sewage sludge in the Commonwealth.

Under § 62.1-44-19:3 O, the Board is prohibited from issuing a valid permit for unincorporated land applications of sewage sludge until the Board develops regulations specifying and providing for extended buffers to be employed for applications of sewage sludge to hay, pasture and forest lands or to croplands where surface incorporation is not practicable. DEQ has not developed such regulations, regulations that would have provided for extended buffers to ensure that health and the environment are protected as required under § 62.1-44-19:3 B. As a result, unincorporated land applications are prohibited by statute, but they are included in the proposed permit.

Commenter: Potter, James, representing Citizens

When will DEQ have an adequate regulation so that they can oversee the sludge application program properly? What is wrong with the people in DEQ? Sludge spreading has affected not only human and animal health but has also permanently ruined farmland and polluted our streams and rivers. This is my future and DEQ is not proposing any significant changes to this pollution. It bothers me and should bother everyone in this room that the greed of a few people, many of whom don't live in this state seems more important than the health of the rest of us. Now we have been presented with the long promised amendments to the biosolids regulations that are supposed to improve the huge issues associated with the sludge program. Unfortunately, I see the same problems present that we were complaining about at last year's hearings. I see that DEQ has been very careful not to give themselves the means to effectively regulate this program since there are no consequences for wrong doing. There is the threat of a

notice of violation but even that warrants a slap on the wrist and not a truly effective deterrent. The industry has and continues to run the sludge program with their big dollars and threats of lawsuits. Citizen input is still lacking. These proposed regulations are of, by and for the sludge industry. This must change and you have the power and the responsibility to make meaningful changes. I volunteer to be part of this citizen participation to make these regulations mean something, rather than business as usual for the sludge haulers. As I understand it the Code of VA has charged DEQ to regulate the biosolids program in a manner that is intended to protect citizens' health and the environment. These regulations fail to protect either and as a result you are issuing unlawful permits. Asking that the State Water Control Board wake up and realize that these permits are unlawful. You must address the deficiencies that we have been pointing out to you and ensure that DEQ is only issuing permits that comply with the Code of VA.

Commenter: Potter, Lorraine, representing Citizens

There are inherent deficiencies in the existing regulations that the State Water Control Board should address and correct. These include: failure to secure written consents from all property owners; failure to secure informed landowner consents; failure to exclude all pollution sensitive sites; failure to provide adequate buffers for health sensitive individuals; failure to provide adequate enforcement. DEQ has failed to address these deficiencies. You must address in the regulation that permits that are not allowed by Code are not allowed and not issued by DEQ.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Code § 62.1-44-19:3 prohibits all land application of sewage sludge "without permit, ordinances, notice requirements, fees." Code § 62.1-44-19:3 A makes clear that a DEQ permit that meets Code requirements is a prerequisite. That same section sets forth a threshold precondition to "consideration" of a permit by the SWCB "unless it includes the landowner's written consent to apply sewage sludge on his property." The Code also sets forth a number of specific preconditions to the issuance of valid permits. One of the most important preconditions is set forth in Code § 62.1-44.19:3 B: "(ii) land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment..." Code § 62.1-44.19:3 O requires that the Board "develop regulations specifying and providing for extended buffers to be employed for applications of sewage sludge" as a precondition to allowing unincorporated land applications of sewage sludge. These provisions preclude land application of sewage sludge if "for any reason" the permit fails to include provisions needed to ensure that those requirements are met. From time to time VDH argued that it did not have authority to impose additional requirements needed to comply with the Code. Thus the Code was amended to provide the option to impose additional requirements, including extended buffers under certain circumstances as an alternative to denying permits. VDH ultimately chose to disregard Code requirements and issued permits that did not meet one or more of the preconditions required by the Code, and allowed land application under those permits that were not valid. Following the transfer to DEQ, DEQ chose to disregard those same Code requirements and reissued new permits. The persistent failure to include sufficient permit conditions to meet requirements set forth in the Code of Virginia is not a minor technicality that can be ignored. The draft regulations fail to address the inability of the SWCB to issue permits that would allow land application of sewage sludge to occur lawfully in the Commonwealth. If there are to be land application permits that allow lawful land applications, the draft regulations

must be substantially rewritten.

In light of past failures of the permit program, it is essential that the various permitted actions be specifically identified in such prohibited language. The following language should be added: "If the board elects not to add adequate extended buffers or to impose other adequate special requirements needed to ensure protection of the environment, health, safety and welfare of individuals in the vicinity of any application site, the application must be rejected." There is also the real probability that issued permits may unknowingly fail to contain sufficient restrictions to comply with Code requirements. Thus the following provisions must appear in the implementing regulations and issued permits: "If at any time following issuance of a permit, it becomes unclear whether the permit requirements are adequate to ensure that the requirements under the Code of Virginia are met, no further land applications shall be made under the permit until and unless DEQ lawfully imposes adequate extended buffers or other adequate special requirements needed to ensure protection of the environment, health, safety and welfare of individuals in the vicinity of any application site."

In Virginia, land application of sludge was prohibited by the Code of Virginia, except under valid permits that are subject to certain preconditions and requirements that ensure the protection of health and the environment. Sewage sludge is a mixture of many harmful constituents considered too dangerous to be discharged by wastewater treatment plants to the ambient water environment. Land application, being the next cheapest method of disposal after ocean dumping, was considered a viable option under the convenient theory that the sewage sludge would be sufficiently treated and assimilated into the environment (i.e., diluted) to minimize the risks to health and the environment. Under the Clean Water Act, the EPA was required to develop enforceable regulations (Part 503) that would protect public health and the environment from adverse effects of pollutants found in sewage sludge. EPA relied on a risk assessment model in its efforts to comply with its legislative mandate. Unfortunately the EPA risk assessment model failed to model all exposure pathways, failed to estimate the synergetic impacts of multiple pollutant exposures and failed to account for health sensitive individuals who may be present in the vicinity of land application sites or to address many sites that are pollution sensitive. For a number of years EPA actively promoted land-application of sewage sludge. Outside its regulations, EPA often substituted the word biosolids, the word developed by the sludge industry to reduce public concern about the land-applied waste in order to facilitate marketing the waste as free fertilizer. Ultimately, EPA was unable to assure the public that land application practices were protective of health and the environment. In light of EPA's inability to assure the public that land application practices were protective of health and the environment, it is not surprising that EPA officially ceased promoting the land disposal option.

The Preamble is written to give the impression that the Draft regulations were written to address deficiencies in the current regulations, when in fact the Draft simply failed to address the many deficiencies that have been brought to DEQ's attention. Indeed, the draft regulations include new provisions that are not allowed by the Code. In order to develop regulations, and ensure policies and practices that comply with the requirements of the Code of Virginia, the Board must disregard many of the representations set forth in the draft and look at the actual regulatory language. Rather than address those issues at this time, the Board is asked to consider the examples set forth in these comments, and to keep in mind that they are simply

examples of the many fatal deficiencies set forth in the draft regulations.

The regulations must make clear and unequivocal that no sewage sludge can be land-applied under issued permits that fail to comply with Code requirements. The regulatory and permit deficiencies are substantially deficient in what they fail to provide, provisions that are essential if there are to be lawful land applications under the DEQ permit program. It is essential that there be an all encompassing provisions in both the regulations and the permits, such as: "No lawful land applications may be made under issued permits that fail to incorporate requirements as set forth in the Code and the implementing regulations." The Code authorizes the Board to issue permits on sites where protection of health and the environment are not ensured by providing for additional protections such as adequate buffers that actually ensure that health and the environment are protected. However, where the Board fails to impose those additional protections, issued permits cannot authorize lawful land applications on such sites. It is essential that the following language be inserted in both the regulations and issued permits: "Where DEQ fails to include additional protections needed to ensure that health and the environment are protected, no lawful land applications shall be permitted on sites set forth in issued permits."

Commenter: Staudinger, Henry, representing Citizens

DEQ's inability to provide draft regulations that comply with the Code is a concern to the public. However, it should be an even greater concern to those who allow their land to be used for the disposal of this waste, Permit Holders, and perhaps most important, Sludge Generators who use this method to get rid of their waste. Under the Code, the ultimate responsibility lies with the Board to ensure that implementing regulations and issued permits are compliant with the Code. The failure of DEQ to draft the requisite regulatory provisions suggests that the Board will have considerable difficulty in meeting its Code mandates. If the Board fails, Sludge Generators would be the most adversely affected, i.e., loss of the land application disposal method in Virginia through the Courts. I recommend that the Board reach out to Sludge Generators to enlist their assistance to encourage DEQ staff to draft regulations that comply with the Code. if this disposal method is important to Sludge Generators, I would expect them to be proactive and insist upon needed changes. I would expect the Board to provide Sludge Generators every opportunity to submit the input needed in order for the Board to approve and issue regulations that comply with the Code.

I have attempted to address land application of sewage sludge in the Commonwealth and at a federal level for 16 years. I participated on the DEQ Technical Advisory Committee until it became clear that the TAC was not designed to develop regulations that complied with the Code of Virginia.

DEQ Response to Comments: Proposed Regulations are not Protective; Not in Accordance with Statute

DEQ has consulted with VDH in the development of this regulation in order to ensure that public health is protected when biosolids are land applied. VDH has recommended that extended setbacks be included for land application sites near persons with certain medical

conditions, and as much as possible, DEQ strives to identify these persons at the time of permitting so that specific setbacks can be established before the permit is issued. DEQ acknowledges that in some cases, these persons or conditions may not be identified until after the permit is issued. In order to meet the statutory requirement of including permit conditions that address public health at the time of permitting, a special condition specifying the procedure through which extended setbacks may be requested will be included in every permit at the time of issuance.

Subject: [Outdated Science Regarding Biosolids](#)

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

A recent peer-reviewed academic article questions the entire EPA regime which has determined that biosolids are safe for human health and the environment and upon which the Commonwealth has relied for the scientific validity of its biosolids program. The abstract for that article includes the following: "...It is believed that the Part 503 standards are protective of human health and the environment and that sewage sludge applied to land poses little risk. A critical inspection of the pertinent literature, however, reveals that the standards were based on outdated methods, outdated data, inaccurate data, and flawed assumptions, leading to underestimation of risk. The standards are not sufficiently protective, and even if changes were made, sewage sludge is so complex that it is very unlikely it could be monitored to ensure the protection of human health and the environment. For these reasons, the practice of land application of sewage sludge must be discontinued." "Another significant problem with Part 503 repeatedly discussed in the literature is that thousands of new chemicals have been produced, used, and released since 1990, and there are new pathogens of concern that have not been considered since the initial standards went into place..." (Citation: "A Critical Review of the U.S. EPA's Risk Assessment for the Land Application of Sewage Sludge", Jennifer M.J. Mathney, NEW SOLUTIONS, Vol. 21(1) 43-56, 2011)

Commenter: Burleigh, H.T., representing Self

It does not take a fifth grader to know whatever you put on the ground will make its way into the waterways, thus whatever is put on the land here in central Virginia will make it to the bay. We will not donate a cent to cleaning up the bay until this practice of spreading sludge on the land is stopped. Millions have been spent on cleaning up the bay, why not try stopping the spread of sludge. Sometimes the simple things work.

Commenter: Henderson, Jim, representing Citizens

It is a fact that a number of chemicals, medical agents and especially birth control and growth hormone residues are found in every sample tested in the recent EPA Targeted National Sewage Sludge Survey Report. It is a fact that only a very small presence of many chemicals will cause detectable biological changes in animals and in young children. These effects can be

subtle and are not easily tested for. However they exist. Can we afford to take the risk of poisoning our food supply, our animals, and our children? The regulations must monitor and regulate more than just the ten constituents presently monitored. When there are 80,000+ known chemicals, plus unknown numbers of proprietary chemicals, DEQ cannot claim to be protecting human health and the environment when they only monitor ten of them.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ has ignored all of the comments made by citizens in the DEQ permit hearings throughout Virginia and the SWCB hearings and permit hearings. DEQ has ignored comments made by various SWCB members who were concerned about the 120 toxins identified by EPA in the 2009 TNSSS. DEQ has ignored comments made by the SWCB chairman who was searching for reasonable setbacks. DEQ needs to review all transcripts of the permit hearings and SWCB meetings to recognize and include the concerns expressed by citizens and SWCB members. Other than changing "sewage sludge" to "biosolids" and making a few minor changes, the proposed regulations are essentially the same as the previous regulations. The proposed regulations do not reflect current scientific studies or real world setbacks to protect water and food supplies as well as the health and privacy of contiguous property owners.

Commenter: Lorien, Joy, representing Citizens

Myth: Sludge spreading is safe because it is based on sound-science. - Fact: The NAS panel concluded otherwise. Current state and federal rules are based on outdated or lack of science. Former Deputy Administrator, Paul Gilman admitted that his agency can no longer guarantee the safety of sludge spreading and that the whole issue "has to be revisited". Because of so many reported "incidents,": EPA no longer promotes land application.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

Farmers are looking for a cheap source of fertilizer. People from the city utilities who are trying to find a way to get rid of their waste products as economically as possible. And we have folks from the corporations or spreaders who are trying to maximize their profits. You can't rely on only one of these groups to protect us. We all have different motives. We should respect their respective positions, but we can't rely on information provided by just one group as the basis for our decisions on how to protect public welfare or public health. We rely on DEQ and the Water Control Board to protect us. We ask you to do that job for us. Remember that we all hope that sludge is safe, but no one here can conclusively say that sludge is safe or that sludge is not safe when spread on the land. More research is needed. More needs to be done and it will cost money. We all pray and hope that we don't find out late in the process that there is something that needs to be corrected or undone. The problem is there are many times that good faith people make terrible mistakes. But that is the way things are. We rely on the government to regulate and do the right thing. Ask people to think about the economy of what we spend and what we spend money on. We need to ensure that we understand the impact that phosphorus has on the bay and make sure that we are not saving money locally to fertilize the farmers' fields but costing money state wide and nationally to clean up our waterways (Chesapeake Bay). I would request that in any regulation that is being drafted that any individuals who have specifically asked to be informed be required by regulation to be informed. I would also ask that the regulations be written in plain clear English, because they are written and organized in a manner that makes them almost impossible to understand.

Commenter: Overbey, Jo, representing Citizens

Under § 62.1-44-19:3 B, the Board is prohibited from issuing a valid permit to land apply sewage sludge unless the permit terms and conditions ensure that the environment is protected when sewage sludge is land applied. In spite of repeated requests from citizens, DEQ has failed to ensure that many pollution sensitive sites have been identified and excluded from land application, or even to use current science to establish needed buffers. Until DEQ includes provisions in permits that actually ensure that the environment is protected; it is submitted that the Board is not in a position to issue a valid permit to anyone.

DEQ Response to Comments: Outdated Science

The vector attraction and pathogen reduction permit requirements and Nutrient Management Plan requirements follow current waste treatment and agronomic practices designed to be protective of human health and the environment. While research is an ongoing process, these practices are protective due to their conservative design. Research into “emerging pollutants” is an ongoing process in all permitting programs at DEQ and new criteria are adopted when deemed necessary through the Triennial review process and subsequently incorporated into permits.

Subject: [Permitting](#)

Commenter: Graf, Mary, representing Citizens

Identification of the land application site must include: the street/route and some sort of address number by which citizens can easily locate the site in relation to an address of particular interest to them and a topographical map must be less than two years old, since buildings and other relevant changes can occur in a short period of time.

Commenter: Hopkins, Roy E., representing Farmers

There has been some difficulty in getting new land permitted under the DEQ program. It has been close to 3 years to bring in a new farm into our operation without obtaining approval. What is the delay? Why does it take so long to get new land permitted to use biosolids?

Commenter: Lurrell, R. David, representing County of Campbell

Require obtaining local certification for any proposed permit or permit modifications for the land application or storage of biosolids to verify the site(s) and proposed application activity do not conflict with any existing land uses including residential subdivisions and places of assembly.

Commenter: Mills, Jr., John N., representing Farmers

Why create regulations just for the sake of regulations? Why does it take so long to get a piece of property approved for use of biosolids?

Commenter: Richardson, Hunter, representing Synagro Central, LLC

Synagro suggests that the following language be added to ensure that the department is processing permit applications in a timely manner and from start to finish should be a 180 day process as stated in all documents. Example: Department has 60 days from the time that they receive a permit to deem it complete or return a list of deficiencies. The department shall notify the permittee in writing when the permit is deemed complete. The department shall schedule the public informational meeting within 60 days of the permit being deemed complete.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Frequent Application Sites - The language in this section requires detailed information on soil type, color, depth, permeability, groundwater monitoring, etc., for land application sites that will be receiving frequent application of biosolids. VAMWA requests that DEQ limit this requirement to sites receiving frequent applications of biosolids at greater than 70% of the agronomic rate.

DEQ Response to Comments: Permitting

DEQ policy is to process a permit within 180 days. This is established by the requirement in the regulation to submit a permit application at least 180 days prior to expiration or expected date of commencing activity. The evaluation of the land application sites is the most complex task, whether issuing a new permit, reissuing a permit or adding land. The proposed regulation requires the submission of topographic maps, as well as current aerial photos that will show features such as other buildings, neighborhoods, etc. The new landowner agreement will require and address, County Tax ID and Tax map for each field.

DEQ has received complaints from landowners regarding the time required for adding land to a permit, most often the problem has been related to incomplete permit packages. The staff will not begin processing a permit until the application has been deemed complete; this includes payment of the fee. DEQ will not amend or reissue a VDH-BUR permit. All additions of land or continued authorizations for land application will be processed through issuance of a new or modified VPA permit.

Subject: [Reclamation of Mined and Disturbed Land](#)

Commenter: Daniels, W. Lee, representing Virginia Tech

The current regulations contain no language allowing DEQ to permit the use of higher rates of biosolids as a part of research programs or when clear emergency situations (e.g., Stafford Airport project in 2001/2001) demand their utilization. As currently written, we would be required to submit a conventional nutrient management plan for approval of any research plots. Since one of our goals in performing field research would be to investigate the net soil and water quality effects of higher than agronomic rates, this requirement is obviously self-limiting

and senseless. Furthermore, the turn-around time for review and approval by DCR is of great concern to us. Similarly, there is no language whatsoever that would allow DEQ to waive conventional nutrient management plan requirements for emergency situations. Historically, both of these scenarios (research plots and emergencies) always involve submission and approval of detailed soil and water quality monitoring plans that are much more stringent than conventional land application permit requirements. Therefore, we feel strongly that language should be added to the final proposed language to allow DEQ discretion in approving both research and emergency application use of biosolids at higher than conventional rates without conventional nutrient management plan approval restrictions.

We support the use of one-time applications of biosolids to newly reclaimed mined (or similarly disturbed) lands that are higher than would be allowed under a typical nutrient management plan framework for established cropping systems on agricultural lands. Our recommended loading rates for these one-time applications have ranged from 25 to 35 dry tons per acre for the purpose of rebuilding soil organic matter and nutrient reserves for long-term soil building benefits. In our previous detailed submissions, we have provided ample evidence from three different mining sites that this practice does not lead to significant leaching of nitrate-N to local shallow groundwater. However, the current proposed regulations still stipulate that a conventional nutrient management plan must be approved by DCR for all mined land applications. Our long-term research results clearly indicate that (A) this approach is not valid for these kinds of drastically disturbed sites and (B) significant long term soil building and revegetation benefits are lost when biosolids applications are limited to conventional rates for reclamation sites.

Commenter: Hatcher, Roger F., representing Farmers

Using plant nutrient requirements in land reclamation projects is worthless. The primary problem in reclamation is the lack of organic matter in the disturbed soil. The traditional approach used by DMME was to add enough organic matter to start the formation of a topsoil. This usually resulted in a short term loss of nitrogen to the surface or the groundwater. I believe the start of topsoil formation is a far better management decision than constant yearly application of small quantities of biosolids or chemical fertilizers. I have witnessed this for more than thirty years, and it is well documented by research at Virginia Tech.

Commenter: Trumbo, Susan, representing Recyc Systems

It is Recyc Systems experience that neither research projects or mine land reclamation projects are agronomic operations. The purpose of a research project or a mine land reclamation project is not to grow a crop to be harvested. Thus it is not logical to require a Nutrient Management Plan which is based on agronomic principles be developed and followed for projects that are not agronomic. We recommend that the definition of land application include both research projects and mine land reclamation as well as landfills.

DEQ Response to Comments: Reclamation of Mined and Disturbed Land

Because all land application requires a NMP as specified in § 62.1-44.19:3.C.8 of the Code of Virginia, and the DCR NMP Standards and Criteria do not specify appropriate rates above

agronomic for purposes of reclamation, a NMP for this purpose would require DCR approval in order to be classified as an NMP as required in the Code of Virginia.

Subject: [Reporting](#)

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

There was a time when DEQ's reporting requirements enabled DEQ (and anyone who viewed the reports) to readily see a number of violations that may have incurred. The reports were changed over the years so that it is generally impossible to do so. This must be changed. Information that must be in the reports would include: 1. Nutrient Information for each site (a. the amounts of each nutrient required for crop growth; b. the amounts (and dates) of each nutrient applied via sewage sludge; c. the amounts (and dates) of each nutrient supplemented; and d. if lime needed to be added, the dates and amounts); 2. Health Information for each Site (a. steps taken to identify the potential presence of health sensitive individuals in the vicinity of the site; b. steps taken to ensure that any health sensitive individuals were not exposed; c. The name and address and telephone number of each individual who filed complaints, the nature of the complaint, the date of the complaint and how addressed; d. certification that landowner consents were in place as of the date of application; e. certification that all applications were made on sites as to which there was informed consent of all landowners); 3. Failure to comply with any statutory, regulatory and/or permit requirement (a. list nature and date of the failure and what actions were taken to minimize the impact and to ensure that it did not occur again; and b. if the failure was on the part of the landowner, describe how the failure was addressed.

Commenter: Trumbo, Susan, representing Recyc Systems

Recyc Systems urges the Department reconsider the information required for permit applications and reporting. Please evaluate for what is necessary and needed versus that which is habit and old policy. More is not necessarily better. We remind the Department of the disparity in the permit holders and acknowledge the difficulty this presents. For example the simplicity of a monthly report for 100 wet tons applied to one field versus a monthly report for thousands of tons from multiple sources on multiple fields. Another example is the requirement to provide a map showing truck routes with the prior notice, when depicting hundreds of sites in one locality, the map becomes similar to the drawing of a child.

DEQ Response to Comments: Reporting

Due to the extensive amount of data reported and collected monthly, and the requirements to "track" the biosolids, the use of a "simple" reporting form is not useful or possible. The permittees submit spreadsheets that are uploaded into the DEQ Biosolids Access Database. The database includes all biosolids analyses, field nutrient loading data, complaint records, inspections and extended buffers.

Subject: Research

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

The report made by Mr. Rubin and Mr. Staudinger of the Expert Panel includes the following: "In developing its Report to the General Assembly, the Expert Panel was limited by several factors, Chief among these factors was a lack of well designed and peer reviewed studies to determine if a relationship between exposure of a population to biosolids at land application sites and subsequent reported health symptoms exists. In addition, the complete characterization of biosolids to identify and quantify every inorganic chemical, organic chemical and microbiological species present in biosolids has never been accomplished, and realistically may never be, due to analytical limitations and the considerable financial costs. With these research and data collection goals not satisfied, the nature of the relationship between exposure to biosolids and reported health symptoms cannot be confirmed from a scientifically documented perspective. The Panel was therefore left to consider reports by citizens who described health symptoms following exposure to biosolids by residing in close proximity to biosolids land application and/or storage areas."

Commenter: McEvoy, Mike, representing Western Virginia Water Authority

I serve as Executive Director of the Western Va Water Authority. I ask for an addition to the proposed regulations. Specifically, a process is needed to allow utilities to experiment with new biosolids treatment and reuse options. There has been much talk about utilizing biosolids for other purposes besides land application, such as energy production, but there is not a good method to permit these projects on a temporary basis to determine suitability or cost effectiveness. I would like to see included in the proposed regulations a permit option that allows for temporary treatment system evaluations and pilot projects. Such permits would need to be flexible with conditions that recognize test equipment, structures, and site conditions are temporary. The term of such permits would likely need to be about two years. This pilot permit process would be beneficial for DEQ as it would allow them to collect the information necessary to permit such systems on a permanent basis. Innovation requires experimentation. I would ask that a process be included in the proposed regulations to facilitate innovation.

Commenter: Scholder, Jerry, representing W.O.R.M.S. (Worms Operating to Reduce Municipal Sludge)

The National Academy of Sciences (NAS) has proposed a study to review the science behind the federal government's laws on applying biosolids to land. The \$531,000, 18-month project would review new information on biosolids land application and evaluate EPA's methods of determining risk from chemicals and pathogens in biosolids. All aspects of the Part 503 risk assessment will be examined, including the identification of pollutants, exposure pathways, default assumptions, and others. Better scientific tools are available now to help EPA gather needed data and monitor land-application practices. Science does not remain static, nor should our efforts to protect human health and the environment.

DEQ Response to Comments: Research

As mentioned in previous responses, research is ongoing across the country. Although direct funding of research by DEQ is unlikely due to the current budget, DEQ does support and collaborate where possible with academic and research institutions to further biosolids research. Section [62.1-44.19:3.A.](#) of the Code of Virginia requires a VPA or VPDES permit for all land application. While the regulation does not specifically speak to pilot studies, it does allow for research and pilot studies to be conducted by wastewater plants under authorization through their VPDES Permit. Research may also be conducted on land application sites permitted under VPA permits. A researcher might work cooperatively with a permitted land applier in the research effort.

Subject: [Soil pH & Potassium](#)

Commenter: Graf, Mary, representing Citizens

There is no permanent pH management so that metals and other toxic persistent chemicals can't mobilize, leach into groundwater, or be picked up by plants.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The limits on soil pH and soil potassium should be governed by the DCR nutrient management plan written by a DCR certified plan writer rather than imposed by DEQ in a biosolids permit.

Commenter: Hopkins, Roy E., representing Farmers

The current pH level of 5.5 in the regulation is a good starting point; however on new ground this restriction does not work. There needs to be some consideration given for a differential for the pH restriction/requirement for new ground that is cleared over soils that have been used for quite awhile.

Commenter: Martin, Steve and Popie, representing Citizens

It is imperative that the regulations should require a minimum pH of the soil to which sludge is going to be applied and the applicant must certify prior to application that the soil is in compliance. DEQ should be required to and Local monitors should be allowed to check the pH prior to application. Proper pH ensures uptake of the nutrients in the sludge.

Commenter: Martin, Steven, representing Virginia Blue Ridge Railway Trail

There needs to be a pH requirement in the regulation. The regulation must require the monitoring of pH otherwise it is pointless. It should be DEQ's responsibility not the applicator.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

DEQ has made no effort to make certain that landowners will ensure that pH is maintained at the appropriate levels in perpetuity if the Permit Holder fails to do so. However, because this must be recorded as an obligation against the land, the sewage sludge regulations must include

language such as: "Landowners shall, in perpetuity, ensure that pH is maintained at levels sufficient to keep heavy metals from leaching into groundwater. Annual reports shall be filed with DEQ to confirm that the pH level is maintained. To ensure that this requirement is passed on to subsequent landowners, the obligation shall be recorded as an obligation against the land."

Nitrogen applications are not only limited to crop growth requirements by the Commonwealth of Virginia, but also be the federal government under EPA's Part 503. Crop growth requirements are adversely affected by insufficient potassium as well as pH levels. Unless both are enforced, the amount of nitrogen will be in excess of growth requirements. The draft regulations would rely on nutrient management plans to ensure that nitrogen is limited to crop growth. DEQ failed to ensure that this state and federal requirement was met following citizen complaints even under its NPDES regulations. Additional provisions such as the following are required: "If potassium deficiencies are not supplemented and/or pH levels adjusted to ensure that crop growth needs will be up taken by the crops, no further land application shall be made on sites owned by the landowner(s) in question or on any other sites that have the same farm operator. In the event that these deficiencies occur more than three times under a permit, the Permit Holder is prohibited from land applying any sewage sludge under the permit."

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed regulations mandate that soil pH must be greater than or equal to 5.5 at the time of each land application if the biosolids have not been alkaline stabilized and that potassium must be greater than or equal to 38 ppm at the time of land application. Although correcting pH and potassium levels using lime or potash would add expense and time to the land application process (it can take up to 90 days to see the results of lime or potash additions in soil sample results), VAMWA does not debate that soil pH should not go below 5.5 in cropping situations and that there is a minimum levels of potassium needed for adequate crop growth. However, the proposed regulations takes what should be recommendations for optimum fertility under nutrient management guidance and elevates them to regulatory requirements. DCR's current S&C include recommendations for lime and potassium treatment for particular crop types. There is no absolute prohibition on applying biosolids to lands with "unacceptable" pH and potassium levels. Parenthetically, VAMWA believes this is appropriate because there are private farming practices involved here. We should allow individual farmers to decide how best to farm their properties. DCR should revise its S&C and impose these requirements on all agricultural fertilizers, including manures. The current proposal to have these restrictions only apply to biosolids is discriminatory. DCR can open a regulatory process to amend its criteria, as it did in 2005, and should do so if it believes additional protections are necessary for fertilizers, manures, and biosolids. DEQ should not permit DCR to shoehorn its criteria into the biosolids regulations.

Commenter: Tignor, Jr. Allen, representing Farmers

I am concerned with the pH requirements of the soil for the application of biosolids and the degree of potash that is in the soil required by the regulations.

DEQ Response to Comments: Soil pH and K

In order to prevent loss of nutrients, there must be optimum uptake of the nitrogen and phosphorus land applied in the biosolids; i.e. optimum crop productivity. In order to maximize production it is critical that all soil nutrients and micronutrients are in balance, including potassium and pH. Therefore, the language has been revised to say:

"When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized."

"When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust."

Subject: [Staging, On-site Storage and Routine Storage](#)

Commenter: DiSanza, Ray, representing Farmers

I would like the DEQ to allow us to stock pile some biosolids material to spread as needed onto pastures that get overgrazed and depleted of nitrogen and necessary elements before the 3 year window currently in effect.

Commenter: Gessner, Mary, representing Friends of the North Fork of the Shenandoah River

The temporary storage time period language in the regulations is excessive. Why is it allowed for 2 weeks. It should be shortened.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Some commenters have suggested that the local government certification should include a statement that the land application or storage of biosolids does not conflict with any provisions of the Chesapeake Bay TMDL or storm water requirements, or verification that the land application does not conflict with any existing land uses. The regulation already requires local government certification that the land application permit does not conflict with local ordinances. There is no need for additional specification to be added; the current wording is broad enough for a locality to review relevant local ordinances before making the certification.

The application requirements for biosolids permits are extremely onerous and raise questions about how some of the information can best be obtained. Likewise, some clarification is needed for some of the requirements. For example, 9VAC25-32-60 F 2 b(3) requires a site map for storage sites including field features within 0.25 miles of the site boundary. It is unclear why 0.25 miles was selected. It is also unclear how that distance is measured. We would propose that the distance be measured from edge of application area rather than property line.

Commenter: Kelble, Jeff, representing Shenandoah & Potomac River Keepers

The proposed regulations must make it clear that the buffer zones described in 9VAC25-32-560 - Table 2 pertaining to sludge applications are minimum buffers applicable not only to the application, but to the storage and staging of sewage sludge as well. While we understand that the permitting process may impose buffers for facilities storing and staging sewage sludge, the proposed regulations need to establish a minimum buffer for such activities, as they do for the application of sludge. Only by clearly establishing such buffers can the proposed regulations ensure the protection of the environment and state waters.

Commenter: Richardson, Buck, representing Farmers

There is the consideration of additional financial pressure on the contractors for the proposed requirements for the covering of biosolids in storage areas. Biosolids are bulky and covering storage areas could be a significant expense to the contractor. I also see there are proposed increased fees being proposed. It is a tremendous program and a tremendous asset to the farmers. I would like to see this program continue to be economically viable for the farmer as well as for those spreading the biosolids for land application.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

"Pertinent calculations justifying storage and land area requirements for biosolids application including an annual biosolids balance incorporating such factors as precipitation, evapotranspiration, soil percolation rates, wastewater loading, and monthly storage (input and drawdown);...This sentence makes little sense in this context and appears to be more applicable to biosolids storage. VAMWA requests that DEQ strike this language.

Biosolids storage at a POTW facility should be exempted from the proposed VPA regulatory requirements for storage.

Information on storage is more appropriately addressed in the VPA regulations. Currently, 9VAC25-31-100 Q 10 is inconsistent with the requirements for storage included in the VPA proposed regulations. This language should be deleted. In addition, 9VAC25-31-100 Q 14 a should be deleted.

The proposed regulations include what is largely a wholesale re-write of the current requirements for biosolids storage. Generally speaking, VAMWA views the revisions as an improvement and consistent with TAC discussions on storage. However, the proposal does not clearly provide an exemption for storage of biosolids within the property boundaries of a POTW. VAMWA believes that this is an oversight, as the VPA regulatory language is really meant to address field storage and storage facilities not associated with a POTW. The storage and handling of all sludge - whether raw, partially treated, or fully treated - on the grounds of a POTW is covered by the facility's VPDES permit. Therefore, it would be unreasonable to subject a POTW to the VPA storage requirements for storage within the property boundaries of the POTW. VAMWA requests that DEQ clear up this inadvertent error by adding a specific exemption for storage at a POTW in the VPA regulations.

Commenter: Stevick, Stephen M., representing Citizens

All proposals to store sewage sludge on a temporary basis should require full and adequate notification of neighbors within two miles of the proposed site and not be allowed if the neighbors object within a reasonable comment period (e.g., 90 days).

New provisions for controlling the field storage of sludge are fundamentally flawed for the following reasons: 1. Allowing the storage to service "...all sites under control of the operator of the farm where the site is located..." authorizes unacceptable volumes of sludge to be stored in any given site of the multiple sites under control of the operator, thereby placing an undue burden on the site selected, the neighbors nearest the site selected, associated roads, and the general well-being of the area; 2. Absent a synthetic liner under and over stored sludge and berms sufficient to retain runoff, the likelihood of absorption of the effluent into the ground and/or runoff on the surface is high, if not unavoidable, as is the potential for malodors; 3. There is insufficient documentation of the impact and integrity of the storage site - an appropriate plan of closure or abandonment of all storage sites should be developed; 4. Road access beyond the use of primary roads provides a danger to citizens - Storage sites, if any, should be limited to direct access from primary roads and to avoid any shared routes, e.g., rights of way, where possible; 5. All access routes should be the most direct route to and from the storage site, and not include use of private roads or rights of way of non-permittees, unless specifically authorized by those who, by title, have a right to use of the right of way or road; 6. Creating and/or closing any and all storage sites should require specific approval by DEQ, including comprehensive testing of the soils at the site for evaluation of pollutants and pathogens before the storage begins and after it is closed; 7. If the unnecessary practice of allowing storage sites is to be continued, then limiting the sludge to be stored to that needed for the immediate farm where it is stored and keeping the sludge in enclosed delivery containers will help to minimize the adverse impact of this practice.

On site storage of sewage sludge for any duration should be prohibited for the following reasons: 1. Offloading of sewage sludge in concentrations greater than called for in the NMP should be a violation of the land application permit and should not be allowed; 2. Emergency situations do not allow for sufficient time to properly prepare a storage site to guard against the adverse effects of high concentrations of sludge; 3. Simpler and safer alternative exists; 4. Emergency situations, such as unfavorable conditions for land application (e.g., climatic, soil, etc.) also apply to the surface storage of sludge, only to a greater degree; 5. The simpler, cheaper and more readily available alternative to on-site storage is to not ship the sludge from the source (e.g., rail head) when unfavorable conditions are foreseen, and leave the undeliverable sludge in the shipping container, itself, preferably off-site; 6. The storage site provides a mean for the continuation of the unauthorized waste water treatment process (separating sewage effluent from sludge) although it avoids being treated as a waste water treatment facility, with the accompanying more stringent environmental regulations; 7. No provision addresses the ultimate disposal of all supernatant produced in any and all storage sites once the sewage effluent is separated from sludge. Such provisions, at the very least, should be in accordance with Part IV (12VAC5-585-620, etc.); and 8. Malodors, airborne pollutants and pathogens emanating from stored sludge are of particular concern. The duration, intensity and potential health hazards are far greater than those of land application.

Commenter: Stevick, Steven, representing Citizens

Storing sewage sludge on the land surface in concentrations greater than it would be applied is of concern. There needs to be justifications for such storage just not a convenience to the hauler. There are valid health and environmental concerns. The alternative is to not ship the sludge from the source when there are uncertain application conditions. Another option would be to require that the materials be left in the shipment container preferable off site until the conditions allow application. The regulations need to limit the sludge stored on any given site to the amount and the site where it is to be applied not an amount for application to multiple sites. Don't allow on-site storage. If allowed, only that amount to be used on that site and require it to be left in the shipping container for proper identification of source and date etc. Storage on site is an accommodation to the hauler not the farmer.

Commenter: Tolliver, Becky, representing CROPS, Inc.

I am from Culpeper Engineering and am here on the behalf of Crops Inc. I am asking for clarification about storage facilities and coverage requirements. Particularly those facilities that are designed for the management of dewatered biosolids and the requirement that they be covered. There is no specification in the proposed regulation to determine who or how it is to be determined whether an existing facility designed for the management of dewatered biosolids is only allowed to contain dewatered biosolids or whether it would also be adequate for "liquid biosolids" as well. My client has an existing facility that has been in existence for a period of time that has an existing permit and we would like clarification that facility is not characterized as only being suitable/designed for dewatered biosolids.

Commenter: Wilkenson, Ricky, representing Farmers

Have had biosolids stored on property and have used biosolids for the past 8 years and have not had any odor problems. You can't buy a better or safer product.

DEQ Response to Comments: Staging, On-site Storage and Routine Storage

Staging was proposed in the December 2009 version of the amended regulations to replace emergency and temporary storage. In response to the comments received, staging has been more clearly defined: Staging is the placement of biosolids on a permitted land application field, within the land application area, in preparation for commencing land application or during an ongoing application, at the field or an adjacent permitted field. Staging is not considered storage and shall not take the place of storage.

The new proposed language in the regulation specifies that, in addition to the requirement that the field is eligible for land application, staging shall not begin unless the field conditions are favorable for land application. The allowed length of time biosolids can be staged was shortened from 14 days to 7 days. If, for some reason, biosolids cannot all be spread by the end of the 7th day of staging, the biosolids must be covered and DEQ notified. This notice shall include the reason why the biosolids were not spread within 7 days. To be consistent with the newly proposed setback distances, biosolids may not be staged overnight within 400 feet of an occupied dwelling or 200 feet of a property line.

Some commenters expressed concern that biosolids offloaded onto the ground are at

concentrations greater than agronomic rates. The Biosolids management plan that is required as part of the permit application must identify staging areas for each field and the procedures that will be implemented for reestablishment of the offloading/staging areas.

Commenters also expressed concern about long term storage of biosolids on the ground. Both on-site storage and routine storage must take place on engineered impermeable surfaces and therefore nutrient overloading is not an issue at the site. The new proposed language requires all routine storage facilities designed to store dewatered biosolids be covered to prevent contact with precipitation; therefore producing no runoff and no supernatant. In response to concerns that existing lagoons and basins would need to be covered in order to store dewatered biosolids, a new condition was added to allow existing routine storage facilities designed to hold liquid biosolids to be used to store dewatered biosolids. All existing and new storage sites and facilities that are designed to hold liquid biosolids are required by the regulation to manage supernatant as liquid biosolids. The supernatant must be monitored and land applied in accordance with a NMP on permitted land application sites only.

In regard to concerns that clarification was needed that the VPA storage language does not apply to storage at the generator's facility, a statement was added that routine storage takes place at a facility not located at the site of the WWTP.

Subject: [Support for the Land Application of Biosolids and Proposed Amendments to the Regulation](#)

Commenter: Anderson, Paul, representing Farmers

My wife and I farm about 250 acres on Frederick County. We use biosolids. Agriculture and forestry are the largest industry in Virginia. Farmers are the largest environmental group in Virginia. The lands and waters are important to us. Biosolids have been a lifesaver on our farm. We have been using biosolids for 8 years.

Commenter: Andrews, Jean, representing Augusta County Service Authority

The biosolids program is well run and highly regulated. We support the proposed changes to the regulations. We need a set of regulations that will keep land application as a viable option for the management of biosolids.

Commenter: Andrews, William L., representing Farmers

I farm in Tappahannock Virginia. I have used biosolids since 1980 and have seen no harmful effects from its use. I just can't get enough of it to use. Biosolids is a wonderful and a safe product. The use of biosolids does make a difference.

Commenter: Baker, E.V., representing Farmers

First and most importantly to me is biosolids is a recycled product that, when applied and used correctly, provide a benefit to my farm and to my community--allowing my farm to

remain a farm. The expense of maintaining my farm is hard as it is even with using biosolids. I couldn't do it without this service. I am one of hundreds of farmers in Virginia that have been using biosolids without any documented adverse effects. The benefits of its use, however, are well documented and increase both my productivity and the quality of Virginia's soils. I have used biosolids on my land for approximately 15 years and in my experience, the system is working very well and doesn't need any major overhaul. This process is closely monitored by the filed inspectors in the Virginia Department of Environmental Quality. In some cases, the use of biosolids provides the difference between farm profitability (or at least breaking even) or not. When a farm fails, the land may wind up being cut up into subdivisions or paved over for parking -- a loss of green space that harms the environment and alters forever the character of our rural communities. Please, in approving new biosolids regulations don't do anything to hurt our farmers or the economy.

Commenter: Bates, J. Barry, representing Farmers

I concur with everyone who has spoken here tonight. I have only been farming for 2 years. I have never seen a problem with the use of biosolids by any of my neighbors.

Commenter: Broaddus, C. Bates, representing Farmers

I farm with my father and my uncle; I am the 5th generation farming this land. I am very concerned about protecting this land for the next generation. Biosolids have been used safely on our farm for more than a dozen years. Please allow us to continue to get biosolids, please do not allow them to be banned by over regulation.

Commenter: Broaddus, John, representing Farmers

I have been using biosolids on my farm for at least 12 years. It is a safe product and I have had no problems with it or the application of it. I am very concerned about erosion and runoff. Biosolids stick and do not appear to runoff as chemical fertilizers can do, which of course is good for the Chesapeake Bay as well as my bottom line. Biosolids have become an important part of our fertility program, as well as taking advantage of a recycled product that is beneficial and safe. Please do not put any more unnecessary regulations or buffers on biosolids applications.

Commenter: Broaddus, Lynwood, representing Farmers

I have been using biosolids for at least a dozen years. I have been very pleased with their application. One of the things I like about biosolids is they are slow release and are not washed off or through many light soils, like chemical fertilizers can do. The smell is kind of a musty smell, which dissipates in a few days, it is by far less noticeable than the dozen or so pigs we have. My mother was opposed to biosolids when they first tried to get permits in Caroline County, back in the 1980's. It took a long time to get her approval. Now she sees nothing wrong with it, and did not complain about the smell when they spread the fields around her house. I like the fact that biosolids are a recycled product. I try to conserve our resources however possible, and recycle whenever possible. Please continue to allow us the access to biosolids, by not adding unnecessary and unfounded buffers and regulations. Biosolids are a safe recycled product that are beneficial to us all.

Commenter: Chambers, Jennifer, representing Virginia Agribusiness Council

In general, the proposed Amendments reflect the recommendations of the TAC with respect to major items including buffering, notification, signage, storage, recordkeeping, etc. The proposed amendments strengthen the permitting program and provide greater notifications and safeguards to the public.

Land application of biosolids is critically important for the agribusiness industry and the farms and forests that receive this beneficial product. Economically, farmers can save thousands of dollars by utilizing biosolids where applicable. The benefits for the Commonwealth include: Improved soil productivity and increased yields for crops as a result of biosolids applications; Environmentally-protective management of nutrient applications through the required use of nutrient management plans for sites receiving biosolids applications; Cost-effectiveness of biosolids by lowering total input costs for producers; lack of illness or negative impacts as a result of biosolids applications on farms, many of which have been occurring over a 25-30 year time period; flexibility and responsiveness of biosolids applicators and farmers in responding to concerns, questions, and reasonable request of neighboring property owners; and local and state presence and response prior to and during biosolids applications through the use of Local Biosolids Monitors and increased DEQ field staff.

Land application of biosolids is one of the most practical options for disposing of biosolids, and is critically important to water treatment. The treatment of wastewater generates solids that remain after the treatment cycle is completed. When the solids are further treated, they become biosolids and can be safely used as fertilizer and for other productive purposes. Biosolids land application is a cost-effective, highly beneficial, and most importantly, safe way to manage solids.

On January 1, 2008, regulatory oversight for land application of biosolids was transferred from the Virginia Department of Health (VDH) to DEQ, following legislative action in 2007. The regulatory process to amend the biosolids regulations was necessary to implement clarifications and procedures as a result of the change in the overseeing agency and applicable permitting programs, not as the result of complaints to DEQ. Our industry supported DEQ's decision to amend the regulations so as to ensure consistency and certainty in how the program operated; a benefit for the public, generators, applicators, and users of biosolids. Throughout the regulatory process, DEQ staff worked with the TAC to seek consensus, or, if consensus was not reached, a reasonable agreement that most parties could agree to.

We wish to associate ourselves with the specific editorial comments submitted by Tim Hayes of Hunton & Williams LLP, as they reflect the collaborative efforts among biosolids generators, land appliers, and the agribusiness industry.

Commenter: Clemmer, Richard, representing Farmers

I am a farmer in Northern Rockbridge County. I am new to biosolids and only started to use it last fall. I talked to other users and decided to use the material to help cut back on my fertilizer bill and to improve the fertility of my soils. The regulations should stay where they are. I have been very pleased with the results of the application of biosolids on my farm. The regulations are in good shape the way they are and should stay as they are.

Commenter: Craun, Kevin K., representing Farmers

I am a local farmer and land owner in Rockingham County and am here to support the regulation for the land application of biosolids. Everyone is a biosolids generator. The land application method of disposal of biosolids is a recycling process and is much preferred over the concentration of the materials in one place, such as a landfill. There is not a lot of difference in biosolids and poultry litter, and I can't ever see the day when we would be allowed to landfill poultry litter.

Commenter: Crossman, Sparky, representing Farmers

I was one of the many farmers attending your Henrico public hearing on biosolids Tuesday night. I echo all the comments and concerns that everyone there brought up. I have used biosolids for about 15 years of the 40 years that I have been farming. Biosolids is an important part of my operation. It's not only a business decision, but an economical decision, with the cost of commercial fertilizer. I am one of the hundreds of farmers in Virginia that have been using biosolids without any adverse effects. The benefits of its use, however, are well documented and increase both my productivity and the quality of Virginia's soils. Please, in approving new biosolids regulations don't do anything to hurt our family farmers or the economy of Virginia.

Commenter: Cuthbertson, Kent, representing Farmers

The application of biomass for farming is an emotional issue as evidenced by the comments, largely because most people are completely uninformed and have been conditioned to consider sludge as nuclear material. Properly stabilized sludge is a natural affordable and more controlled alternative to chemical fertilizers. Given that the price of petroleum, the source of fertilizer, is soaring; properly stabilized and professionally applied biomass is an excellent solution. I apply biosolids on my land. I maintain a current Nutrient Management Plan as well as Application Records on my land. I submit that I know more about my land's health (pH, soil samples, weed applications) than most homeowners who buy several bags of Scott's and apply all of it for good measure, more is always better. How many homeowners keep records of their applications? The answer is none and most of the excess fertilizers and insecticides they apply runs off with the rain into the nearest receiving stream, fish kill anyone? The current regulations for applying biomass work. They do not need fixing. If you want to control environmental degradation, look at applying the same standards to suburbia and the homeowner that are applied to the farmer.

Commenter: Davis, John, representing Farmers

My sister and I own and operate a small farming operation in Greene County VA. Over the years the land has been used to produce grain, hay and pasture. Currently hay is the only cash crop. We have used Biosolids for eight years and it certainly has improved the soil and increased the productivity. I have lived on the farm for over sixty years and can attest to the fact that it is in the best conditions; most likely in the best condition of the 139 years that the family has owned this land. Broom sage and soil erosion are not an issue. I am not aware of any ill effects of Biosolids Applications. I am a proponent of biosolids land applications.

Commenter: DiSanza, Ray, representing Farmers

We own a 70 acre farm in Fauquier County in which about 30 acres is pasture. This 30

acres costs us on average \$2,500 per year to weed and fertilize. This cost could be drastically reduced almost 100% if the regulations restricting the use of biosolids were relaxed a bit. I currently also lease 35 acres for hay production and until 3 years ago my costs to fertilize and maintain the soil quality was about \$4,000 per year. Since I found out about the biosolids program my costs have been about \$500 per year for potash mainly but my hay quality went up. The hay we produced 2 years ago came in at almost 16% crude protein. Since the quality was so high I was able to produce 30% more than I had previously and was able to sell that hay at a premium. I understand that some people are put off by the odor of the biosolids but in my experience this only lasts a few days and has no adverse health effects to anything. By contrast, drive by a dairy farm and the odors coming from them are continuous. I am not saying to deregulate the application of this at the expense of the health and safety of the people in these communities but if we make farming so unprofitable they will cease to exist.

Commenter: Dunkley, Barry T., representing City of Danville

Land application of biosolids is of great benefit to the agricultural community . It does not pose a health hazard, is environmentally safe and usually produces little odor. Urge the SWCB to follow the advice of the technical advisory committee and approve a biosolids regulation that is practicable, easy to understand and enforce and does not place unnecessary restrictions on the agricultural recycling of these valuable nutrients and soil amendments.

Commenter: Forbes, Tommy, representing Farmers

I have owned and operated a family farm in Brunswick County Virginia since 1944. I have seen many changes and trends in farming; and, biosolids has played an instrumental role in the continuance and profitability of my farm. Over the past nine years, I have used biosolids three times and have found it more effective than commercial fertilizer. Moreover, biosolids adhere to the fields better, it has doubled my crop production and there is no charge. The low profit margin in raising cattle would make it financially unfeasible to cover the price of commercial fertilizer to produce the same results. I have used biosolids without any documented adverse effects. When applied and used correctly, biosolids will provide the opportunity for me to continue farming and allow for my farm to continue for generations to come. Please carefully consider any new biosolids regulations which may adversely affect Virginia farmers and negatively impact the agricultural contribution to Virginia's economy.

Commenter: Goodman, Rudy, representing Farmers

I farm in Bumpass Virginia. Have used biosolids for over 10 years and have never seen a problem with its use and I don't think anyone else has.

Commenter: Grandstaff, James, representing Henrico County

I am the Division Director for the Water Reclamation Facility for the County of Henrico. I am also a board member of the Virginia Biosolids Council and the Virginia Municipal Waste Water Association - Biosolids Committee. My comments tonight are as the Division Director of the Henrico County Water Reclamation Facility. We generate biosolids which are land applied on farm land in Henrico County and surrounding counties. Henrico County choose land application as opposed to other options like incineration and landfill disposal because it remains the most cost effective and environmentally responsible means of disposal for the county. It has been my experience that the recycling of biosolids by land application when done in accordance

with the existing rules and regulations and best practices is protective of human health. I followed the deliberations of the Expert Panel. After almost two years deliberations, they found that they had uncovered "no evidence or literature verifying a causal link between biosolids and illness". They also urged that biosolids should be viewed as a resource rather than as a material that uses valuable landfill space. I agree with previous speakers comments regarding the buffer issue. I recommend that the board to make sure that the proposed regulations are reasonable and are based on the latest scientific research. It is important that the program remain a safe and responsible means for the ultimate disposal of biosolids in Virginia.

Commenter: Grove, Tim, representing Farmers

The proposed regulations serve to strengthen the biosolids program in Virginia by increasing awareness, increasing oversight, and increasing accountability. Details of the regulations are a product of the TAC - a group of people representing all stakeholder groups from the academic, regulatory, agricultural and environmental communities. We support this committee, their recommendations, and the process by which the regulations were reviewed and modified. We need regulations that serve their purpose, but we need those regulations to make sense.

Commenter: Harris, W.D, representing Farmers

I am a cattle and grain farmer in the Lake Anna area. My family has been farming the same farm for over 100 years. Would like to echo all of the statements and concerns that have been noted here tonight.

Commenter: Hatcher, Roger F., representing Farmers

Biosolids are a very valuable resource, especially given the close relationship between commercial fertilizers and petroleum. If the DEQ placed its primary emphasis on assuring a quality product, there could be allowed greater flexibility on how the product is used, with decisions made by farmers and soil scientists. In other words, let farmers treat biosolids as fertilizer, just as they do commercial chemicals. This would allow the use of a large number of field inspectors, supported by the producers, to increase their responsibility to recommend changes that farmers will likely embrace, such as enhanced filter strips and sediment traps which hold nutrients on the farm. This of course would still be done in conjunction with Nutrient Management Plans, but would give us a better handle on what to do with the phosphorus issue and the upcoming EPA TMDL program. The current TMDL and CREP programs are well accepted and utilized, but they are generally limited to fencing and water supply support. This same administrative structure could be expanded to filter strips and sediment traps.

Do not undo all of the hard work your staff has put into this regulation issue.

For the past 12 years have used biosolids annually on various sections of an 800 acre. Allow application up to 100 feet of the dwellings and have had no issues and no adverse impacts. The proposed regulation is a great document. The DEQ staff has been very professional and very sensitive to the issues raised during the regulation development process. The proposed regulations are very stringent in the protection of biosolids quality for use on the land. Remember the application of biosolids is an agricultural activity and should be treated as

such recognizing the challenges that farmers face in coordinating the fertilization and harvesting of crops.

Sludge was an appropriate description of wastewater solids in the early days of POTWs. With the implementation of the Clean Water Act, wastewater treatment processes have improved tremendously. So has the quality of sludge which can now appropriately be called biosolids. Biosolids are tremendously important in improving soil quality. More than a source of nutrients, they improve the very structure of soil, making the use of other chemical fertilizers safer and more efficient.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Several commenters have referenced an Attorney General Opinion issued on October 29, 2010 as support for a conclusion that the biosolids program is "illegal". However, all that opinion provides is that a permit must be issued by the SWCB before sewage sludge may be land applied, marketed or distributed, and that the permit must be in compliance with VA Code § 62.1-44.19:3. Virginia's current regulatory program is fully consistent with VA Code § 62.1-44.19:3. The proposed regulations only strengthen the regulatory program. The argument raised by some commenters appears to be that, based on their belief that land application of biosolids is not safe, issuance of a permit for land application does not protect human health and the environment and therefore such permits are illegal. These commenters have not offered any support for their statement and, in fact, their statements are not supported by the record. The General Assembly has considered this issue numerous times and determined that land application of biosolids should be allowed in Virginia. The Expert Panel formed by the General Assembly concluded that land application is a safe, cost-effective and beneficial means of disposing of biosolids. So long as the SWCB issues permits that meet the requirements of the regulations, those permits are legal. The regulatory program developed by DEQ and VDH is an appropriate system that protects human health and the environment. It is based on state-of-the-art research and information developed at the national and state level.

The proposed regulations are a marked improvement over the current regulatory program and reflect an intensive effort on the part of biosolids generators, land applicators, farmers, and other interested stakeholders to clarify and simplify the regulatory requirements and permitting process. The proposed regulations still require some revision for purposes of clarity and accuracy, but overall provide an excellent baseline for an effective and protective biosolids regulatory program.

The treatment of wastewater generates solids that remain after the treatment cycle is completed. There is no way to treat wastewater that does not result in these solids. When the solids are further treated, they become biosolids and can be safely used as fertilizer and for other productive purposes. The solids generated during the wastewater process must be disposed of in some manner. There are limited options for their disposal. Biosolids land application is a cost-effective, highly beneficial, and most importantly, safe way to manage solids. If land application were not a viable option, wastewater treatment plants would be forced to either landfill these materials or incinerate them. If these options are even available (for example, landfills often set a limit on the amount of material they will accept and many treatment plants do not have access to an incinerator), both are, on average, much more costly.

Commenter: Hopkins, Roy E., representing Farmers

We live in Louisa County. Have had the pleasure of using biosolids for over 20 years and have had no ill effects on my family or the soil. Biosolids have done wonders for the farm. It is a great benefit to the farms and to the soil.

Commenter: Inskeep, Jr., Bernard C.; Inskeep, John R.; & Inskeep, M. Byrd, representing Farmers

We run a dairy farm of about 450 head in Culpeper County. We have farmed the land since 1923. We have applied biosolids on a total of about 700 acres at a rate of 200 - 265 acres per year for the last six years. We have had any complaints from our neighbors about the application. The process has drastically reduced our application of commercial fertilizer, which is good for the environment. The biosolids are immediately disked into the soil on the cropland which is much better for the Chesapeake Bay than the commercial fertilizer we would otherwise be forced to use. For a long time agriculture in Virginia has suffered economically, and this program gives us an economic shot in the arm. The benefit to our land is the lime, phosphate and soil conditioner that the biosolids provide. The existing regulations have safely governed the six years we have used biosolids. We know if no justification for additional regulations, which will cost the municipalities that produce the biosolids more money.

Commenter: James, Benton, representing Farmers

The land needs nutrients in order to thrive and grow the seeds that are sown. If everyone benefits from the land, why not allow everyone to contribute to it? The farmer that has taken care of his land for generations would never put anything on it that would do it or the product that is grown in it harm. Biosolids have played a part in keeping the small farmer going and should continue to do so. With the use of biosolids on my farm I can continue to keep the nutrients needed for the soil. If we are "regulated" so far above the realm of reality, no one will benefit. I have used biosolids for several years with only good effects to the land. My livestock have benefited from the use of biosolids by allowing an efficient growing season for grass and hay. Without the help of biosolids, our lands can't flourish and we don't have the benefits of a good year for hay and grass. If we don't have that, we don't survive, and there is no program to save us then. Farming is a very vital part of the Commonwealth economy, with considerable contributions to jobs. Adding new unjustifiable regulations to the biosolids industry will not help to convince those neighbors that find it an ick factor, to change their minds. If we had no regulations, I could understand the need, however I find that the currently in place regulations are within reason and beyond as they are now. More bureaucracy, simply for the sake of bureaucracy is just plain overkill feeding into the "needs" of those that live on their quarter acre without the ability to see the future of all, only themselves. Allow the program to continue to be regulated as it is, with the same monitorization program that seems to work just fine and has for many years.

Commenter: Jones, V. Rea, representing Farmers

I have used biosolids for the past 25 years with only positive results. With the present regulations, I have never experienced any adverse effects to land, livestock, water, wildlife, or humans. Initially, in hot weather, I would hear a complaint of the odor. With the improved technical treatment at the plants and lime stabilizing, this complaint has virtually ceased. If you

believe in recycling, this is the best that exists. I think that the controls in place are sufficient, and request no changes be made to existing regulations.

Commenter: Keener, C. Wayne, representing Farmers

I have been a user of biosolids for a number of years and have been pleased with the results and impressed with the way in which the applicator followed regulations. The present system works for me. My soil seems to be more capable of retaining moisture and nutrients which in turn helps to reduce erosion. The use of biosolids has made farming more profitable making it possible to continue farming as opposed to selling the land for development.

Commenter: McEvoy, Mike, representing Western Virginia Water Authority

The proposed draft regulations have been deliberated and developed through a technical advisory committee and participation process. I urge you to give the recommendations of the TAC great weight in your deliberations on adoption of the amendments. Though I don't fully agree with all of the recommendations, but on balance it was done on a fair approach. DEQ inspected 87 percent of the farms that received biosolids this past year. That high level of inspections should serve to show the high level of scrutiny that the program is under. It is probably one of the most regulated programs at DEQ. There are also County and Regional Monitors that inspect and oversee the program. This has been a fair and reasonable process and provides a high level of protection.

Commenter: Meadows, David, representing Farmers

I represent my five brothers, my sister, and myself. We along with our father and mother started purchasing land in Spotsylvania and Orange Counties in 1965. We currently own over 3000 acres of land either jointly or individually. We have had biosolids spread on portions of our land for several years. We want to endorse the use of biosolids as a terrific win-win situation for everyone involved. Everyone creates biosolids and these same biosolids must be deposited in a sanitary and safe way. We apply biosolids to pasture and hayland. We are careful to follow all regulations and work closely with the representative from RecycSystems Inc. to make sure all local and state regulations are met. They methodically and painstakingly flag each field where the biosolids are to be applied and then apply the appropriate amount to each field. They are very careful to spread everything the same day it arrives on the farm and are careful to keep a buffer from all lakes, streams, water sources and steep areas where drainage could occur too fast. They go out of their way to be good stewards of our lands and streams. My family and I take pride in trying to do what is "best management practices" for our farms. In 2005 we won the Tri-County/City Soil and Water Conservation District Clean Water/Bay Friendly Award. If we thought that the use of biosolids wasn't the best way to help our urban neighbors and at the same time enhance the opportunity we have to pass the family farms on to future generations we would not be here supporting the continued use of them. To the best of my knowledge we have had not one neighbor complain in any way about our use of biosolids. This is a good program that is working for everyone involved so the sensible thing to do is to leave it alone.

Commenter: Meadows, Fred, representing Farmers

My brothers and I farm in Spotsylvania and Orange Counties and have used biosolids for years. It has been very very successful. Say Amen to all of the comments made here tonight by

the previous speakers. Stewardship emphasis is so important. We want to take care of our land and families. We were very cautious when we began this process 12 to 15 years ago. We researched it and found that there were no problems. There is nothing wrong with the use of biosolids on the land. This is a Win/Win situation.

Commenter: Messick, Jimmy, representing Farmers

I am here to speak In favor of the application of biosolids to land. I am a 3rd generation dairy farmer. We have 300 head of dairy cattle. Even with the waste from our dairy cattle, we still have room and the need on our 1800 acres for the application of biosolids. Biosolids is an important part of our management plan for the farm. We have used biosolids for at least 30 years. We were one of the first farms that used biosolids. We have had no adverse effects from the use of biosolids and will continue to use biosolids.

Commenter: Mills, Jr., John N., representing Farmers

I farm in Hanover and King William County. We are a family farm. Farmers are good stewards of the land. Farming was a way of life and still is, however it is now a business that survives on the use of good business practices and making good business expenses. We are no longer just producing food for our own use, we are producing it for our entire country and are feeding the entire world. We survive by cutting our expenses and using less fertilizer, not more. We use prescriptive applications based on soil samples and soil types and plant tissue samples and even splitting applications of fertilizer. We operate under a Nutrient Management Plan that is written every 3 years by a certified crop planner and updated annually. This enables us to match our soil types and nutrient needs with our crop types through the use of realistic yield goals. Biosolids fit into these goals as well as commercial fertilizers. Have used biosolids for over 28 years and never have had an adverse impact to the soil, family, our cattle or our neighbors. We have used the same contractor for those 28 plus years and have never had a problem or an issue. Each year we both fine tune our operations to make them more efficient. Using biosolids makes good economic sense. I make business decisions every day based on scientific fact, agronomic data and good common sense. I ask that the regulation amendments be given the same thorough considerations.

Commenter: Milton, Herbert, representing Farmers

4th Generation Farmer - I was taught at an early age, my responsible was to protect my property and the environment. Have used biosolids for 8 years. There has been any adverse impacts to my land, livestock, wildlife, or my family. I use biosolids because they improve the productivity of my crops and soil. They are a benefit to the farm and the community. Have had no issues with the company (Nutri-Blend) that has been applying the biosolids. They do everything to be protection of the environment. Urge you to not do anything that will hurt the farmer. Don't complain about the farmer with your mouth full of food!

Commenter: Milton, Mary, representing Farmers

Always lived on a farm. For the last 52 years have kept records on the farm operations. For the last 8 years have used biosolids and have had exceptional grass and hay. Biosolids is an approved agricultural product. It has no adverse effects on health, the environment or on water quality. It has a net value of \$350 per acre. It is a green practice and the ultimate in recycling. Future generations must be able to wisely use every advantage that they have in these

increasing difficult economic times. Save the farmers and leave the regulations where they are.

Commenter: Moore, Jean M, representing County of Henrico

The Henrico County Department of Planning reviewed the proposed Amendment of Regulations Pertaining to Biosolids After Transfer from the Virginia Department of Health and has no additional comment on the proposed amendments at this time.

Commenter: Mottley, Sr., Robert, representing Farmers

As a farmer most of my life, I care greatly about my farm, surrounding farms and the health of all involved. I chose to use biosolids on my farm because of the benefit it could provide. I started using biosolids three years ago on my farm. I have seen positive improvements in the land. Recyc-Systems is working great for my farm land and I hope that there aren't any great changes to these benefits. Farmers are having to leave their farms now because of great increase in fertilizer and lime cost. Ten years ago I bought an adjoining farm that the land had been abused. Without the biosolids program I could not afford to get the land back to the condition it is in now. The biosolids program has been a great help to me, to the land, and to many other farms. Please help the farms and farmers to continue these programs without many changes. We have 10 adjoining neighbors to our farms and no one has ever complained to us about biosolids. Please help the farmer in Virginia continue with the biosolids program.

Commenter: Mundy, James, representing Farmers

We own a beef cattle farm at 15522 Montebello Rd., Orange VA. The farm has been in my family for 140 years. We use Recyc Systems for the application of biosolids. We have been impressed with their continuous monitoring of our soil and their professionalism in applying the biosolids. There have been no complaints about the biosolids. We cannot afford to apply commercial fertilizer. Our ability to produce worthwhile hay is dependent upon the biosolids. It would seem that the current system is working quite well. I would hope that your final report will address technical matters and will not merely appease everyone at the table realizing that some seek the extinction of the meat industry. Finally, as a taxpayer, I wonder why it has taken 3 years of your salaries and countless industry dollars to tinker with a system that benefits everyone?

Commenter: Powell, Mary, representing Nutri-Blend

Biosolids have been proven to be safe by decades of use on farms in Virginia and by countless studies. It is a heavily researched materials and we urge that the existing science be taken into account when considering these proposed regulations. Also, as an observer of the TAC for the biosolids regulations, we support the process and feel that it was inclusive of many perspectives on the issue. We would like to see the regulations returned to the TAC before a final decision is made. Please use the best available science and practicality to avoid overregulation. The biosolids industry touches everyone in Virginia and provides many benefits. Urban areas are provided with a way to recycle and use their wastes, agricultural areas receive much needed organic matter and nutrients applied in a sustainable way under the direction of a nutrient management plan, and our state waterways are protected from nutrient runoff and leaching.

Over the last decade, there have been enormous changes in the regulation of the biosolids

program in Virginia. Because of the political pressure brought by a minority of citizens in the Commonwealth, this valuable by-product of wastewater treatment has been increasingly regulated. We are at the point now where the regulations have become excessive, no longer have scientific merit, and threaten to effectively regulate biosolids contractors out of business. The biosolids program is a tremendous boon for farmers and urbanites in Virginia. Farmers receive free fertilizer with this program, but they also receive the organic matter contained within biosolids and a nutrient management plan. Both of these things further the goal of reducing nutrient runoff and leaching, critical for Virginia's restoration of the Chesapeake Bay. Wastewater plants remove nutrients from the sewage stream so that it will not enter waterways. This material must go somewhere and putting it on farms where the nutrients can be managed and properly utilized is a great example of recycling. Biosolids have been proven to be safe by decades of use on farms in Virginia and by countless studies. It is a heavily researched materials and we urge that the existing science be taken into account when considering these proposed regulations. Also, as an observer of the TAC for the biosolids regulations, we support the process and feel that it was inclusive of many perspectives on the issue. We would like to see the regulations returned to the TAC before a final decision is made. Please use the best available science and practicality to avoid overregulation. The biosolids industry touches everyone in Virginia and provides many benefits. Urban areas are provided with a way to recycle and use their wastes, agricultural areas receive much needed organic matter and nutrients applied in a sustainable way under the direction of a nutrient management plan, and our state waterways are protected from nutrient runoff and leaching.

Commenter: Razik, Al, representing Maryland Environmental Services

The Maryland Environmental Service is a not-for-profit that performs independent third-party land application inspection services on behalf of several biosolids generators in the region. Our program and the experience of our staff give us a unique perspective on biosolids land application. MES believes that biosolids land application is a safe practice that poses insignificant risk when done properly. We feel that the proposed regulations are protective of public health and the environment.

Commenter: Richardson, Buck, representing Farmers

I farm in Middlesex and King and Queen County. I have used biosolids for 9 years. Had nutrient deficiencies in our fields prior to the use of biosolids. Biosolids have improved the fertility of our soils. I agree with all of the comments made here tonight.

Commenter: Rosson, Charles S., representing Farmers

I have a farm in Louisa County and have used biosolids for 25 to 30 years. Our family has never had a health issue associated with the application of biosolids. There is an economic value to biosolids. Helps with the profitability of our farming operation. Farmers are good stewards of the land and believe in what they do. Sludge is a great opportunity for us both economically and in building the health and tilth of our soil. I would be firmly against any new regulations that would make it more restrictive or more difficult to use.

Commenter: Salisbury, George, representing Farmers

I farmed in Spotsylvania County for 29 years and didn't do very well. If we had had biosolids things might have been different. We gave that farm up and then bought another farm

called Chestnut Lawn that we have had for 21 years. We have done very well there. We use biosolids on the farm and couldn't keep it without biosolids. Our neighbors also uses biosolids and has told me he couldn't keep his farm without the ability to use biosolids. We have never had a problem with the use of biosolids. I am very proud to be a farmer and want to continue to farm until I can't walk.

Commenter: Scholder, Jerry, representing W.O.R.M.S. (Worms Operating to Reduce Municipal Sludge)

Mr. Kent Cuthbertson mirrors my opinion best in stating; "The application of biomass for farming is an emotional issue as evidenced by the comments, largely because most people are completely uninformed and have been conditioned to consider sludge as nuclear material. Properly stabilized sludge is a natural affordable and more controlled alternative to chemical fertilizers. Given that the price of petroleum, the source of fertilizer, is soaring; properly stabilized and professionally applied biomass is an excellent solution. "

The lack of knowledge by people concerned about toxins, diseases, and lack of oversight and monitoring procedures is astounding. No one has pointed out the importance of differentiating the terms "sludge" and "biosolids". It is quite significant as untreated "sludge" is very rarely if ever applied directly to land. Biosolids, which are of a particular class of treated sludge, are in fact commonly applied to land. As Mr. Cuthbertson has so accurately referred to in his comments: Properly stabilized and professionally applied biosolids present no potential harm to waterways or humans by way of pathogens or metals contained within them.

Commenter: Sizemore, Jim, representing Alexandria Sanitation Authority

I have the responsibility for managing the Authority's environmental regulatory programs, including biosolids. The Authority generates approximately 60 wet tons of Class A Exceptional Quality Biosolids each day. The Authority is committed to sustainability and the beneficial use of biosolids. We participate in biosolids research and have partnered with our applicator to pilot a soil amendment product, blending biosolids with wood fines to create a material for landscapers and gardeners to amend soils. This and other beneficial options look promising, however, land application of biosolids continues to be an important disposal option for the Authority. The Authority generally supports the proposed biosolids regulations and the Technical Advisory Committee's work.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

Biosolids are the nutrient-rich organic materials resulting from the additional treatment of sewage sludge in a municipal wastewater treatment plant. When treated and processed to meet specific quality and regulatory standards, sewage sludge becomes biosolids, which can be safely recycled and used as fertilizer and soil conditioner to stimulate plant growth and to improve and maintain productive soils on farms and forestland. Biosolids, in liquid or dewatered form (called "cake"), are ready to be returned to the environment as a fertilizer and soil conditioner. Biosolids can be recycled directly on soils in the forest, on agricultural land or can be composed and used for landscaping and gardening. Agricultural application of biosolids is beneficial for the farmers and their fields. It is estimated that currently the use of biosolids can save a farmer more than \$350/acre in fertilizer costs by choosing to use biosolids rather than commercial fertilizers. In Virginia, just over 50,000 acres a year receive biosolids.

Additionally, agricultural recycling of biosolids benefits the ratepayers of wastewater treatment facilities. There are other options, but they are not beneficial and oftentimes much more costly. Biosolids recycling in Virginia is not unique, since it is an accepted practice in all 50 states and throughout the world, according to a United Nations report.

Long-term scientific studies have consistently demonstrated that biosolids recycling through land application is safe.

The overwhelming body of scientific literature supports the determination that recycling of biosolids on agricultural farms and fields is safe, that airborne constituents emitted from land applied biosolids are of very low concentrations, that constituents are neither infectious nor irritating, and that whatever airborne constituents may travel beyond the land application site and buffer areas at concentrations at or below detection limits or at background levels. Evidence in the scientific literature does not support a need to extend the current buffers for "health sensitive individuals". The existing buffers in Virginia provide an excessive amount of caution. The large body of evidence shows that land application has resulted in no community documented health effects. Several critics of biosolids land application have argued that health complaints are relieved by buffers greater than 400 feet. This statement is neither plausible nor verifiable, and their connections do not follow; 1. No evidence is given by critics that health effects occurred from exposure distances greater than 400 feet; 2. No explanation is given about the asserted relief from exposures that allegedly occurred from land applications greater than 400 feet; and 3. No proof has ever been offered by any Virginia citizen that biosolids constituents could plausibly be airborne beyond 400 feet. Critics' use of the term "health sensitive individual" suggests that the individual might be experiencing a phenomenon widely acknowledged in the field of medical science which is panic reaction to environmental triggers. Some critics have argued that there is a causal link between exposure to land application and health effects and that there is scientific evidence to support this claim. As noted previously, the scientific evidence of a causal connection between sewage workers' exposure and health is weak, which means, by extension, that a causal connections between the exposure experienced by a neighbor to an application site who may be briefly exposed to biosolids constituents at much lower levels and health effects is even weaker. There are adverse economic impacts of extending buffers simply to provide some measure of comfort to those who have an unreasonable fear of biosolids. Biosolids buffers do have negative consequences for farmers and extending them exacerbates those consequences, including increasing costs for fertilizers or lost productivity. Request that the Board base its decisions on the available science and the decades of practical experience that demonstrate the safety of biosolids and their benefits to agriculture and the environment.

The VBC supports and encourages a final review process of the regulatory changes by the TAC prior to final review and discussion of the regulations by the State Water Control Board.

Virginia's regulations are more stringent than the federal Part 503 Rule on land application rates, slope restrictions, buffers, soil pH and nutrient management plan requirements.

Commenter: Smith, Gregory, representing Farmers

Biosolids have been applied to an area in Culpeper County that is used for the "Union

Encampment of 1862 and 1863". I spread biosolids on a lot of that land and had no complaints or heard of no ill effects of the application of biosolids. RecycSystems has a clean operation and try to do things right. They also support the local FFA and 4-H groups. Hope that farmers will be able to continue to apply biosolids to their farms. The use of biosolids is a tremendous benefit.

Commenter: Speck, W.B, representing Farmers

Have been involved with biosolids as an end user for the past 3 years and have been very much pleased with the results. I have increased crop yields with decreased input costs considerable on my part. The applicator has done a good job in meeting the regulatory requirements.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Based upon our experience, we believe biosolids land application is safe, cost-effective, and highly beneficial. Land application of biosolids is a winning proposition for the agricultural community. During these difficult economic times, farmers can save significant amounts of money by using biosolids instead of chemical fertilizers. Further, because they are highly regulated, biosolids use is superior to chemical fertilizers. VAMWA is pleased that the state's farming community benefits by using biosolids, and supports its use on agricultural properties across the state. Likewise, land application benefits our local ratepayers. If land application were not a viable option, POTWs would be forced to landfill or incinerate. If these options were even available (for example, landfills offer set a limit on the amount of material they will accept and many POTWs do not have an incinerator), both are, on average, much more costly. The safety of biosolids land application is supported by the HJR 694 Biosolids Expert Panel Final Report, which stated that, "the Panel uncovered no evidence or literature verifying a causal link between biosolids and illness." Furthermore, VAMWA has compiled additional data that demonstrates that biosolids are safe and can be land applied without any negative impacts on the environment or human health.

Every aspect of biosolids treatment and land application is also subject to extensive oversight by both the federal Environmental Protection Agency (EPA) and DEQ. Federal regulation of biosolids is an ongoing process, always providing the beneficial potential to incorporate new science. EPA is required to review its biosolids regulations every two years to identify standards that may need to be updated or added. Pursuant to the federal statute, EPA established at 40 CFR Part 503 minimum treatment requirements and operational safeguards for land application of biosolids. Significantly, EPA has expressed a preference for managing biosolids through land application. In the preamble to its Part 503 regulations, EPA noted that the "proper management of ever-growing amounts of sewage sludge has become increasingly important as efforts to remove pollutants from wastewater become more effective." EPA further stated, "sewage sludge is a valuable resource. The nutrients and other properties commonly found in sludge make it useful as a fertilizer and soil conditioner." While Virginia meets EPA's Part 503 regulations, the state program goes far beyond the federal regulations in several respects, including mandating permitting of land application and additional site-specific standards. Since the current program was first adopted, these requirements have continued to evolve, with the General Assembly going well beyond the Part 503 regulations in issues such as

nutrient management plans, operator certification, financial responsibility, extended buffers, and prohibitions on on-site treatment.

Commenter: Strother, Charles E., representing Farmers

I have a 500 acre in Northern Fauquier County. My farmer was the first farmer to take the sludge when it became available. We have had biosolids on the farm for quite awhile. Our use of biosolids goes back a long way. My father lived to 102 years old and he was out in the fields all the time, so I don't think that there are any health issues with its use. There have been no negative aspects. Biosolids have been very beneficial to our farm. Our applicator, Synagro are wonderful in their stewardship of how they handle everything.

Commenter: Tignor, Jr. Allen, representing Farmers

I live in Caroline County. Appreciate DEQ for the jobs that you do and the efforts that you all put into it. There are so many new laws and regulations that there may soon be a time where there is so much legal gridlock that it will be impossible to do anything. I hope that you will use your academic training, clear thinking and common sense to do the right thing with these regulations. One thing to remember that as the population increases these biosolids have to go somewhere. We don't want them in the oceans or the landfills. A lot of phosphorus and nitrogen is needed to grow crops and we are getting good results through the use of biosolids to provide those needs.

Commenter: Trumbo, Susan, representing Recyc Systems

In spite of our support for additional requirements, we recommend the Department seriously consider the purpose and whether or not it is met when the requirements exceed that found in the Federal Part 503 or the State Code. We urge the Department take advantage of the opportunity to eliminate that which is included by habit and policy but provides little to no real benefit.

Since the early 1980's the land application of biosolids have been regulated in Virginia. Biosolids was commonly used as a nutrient source for crops prior to the adoption of regulations. Early regulations included requirements for site management and nutrient management which preceded the formal programs now implemented by state agencies. Over the past thirty years, the biosolids use regulations have undergone many revisions and updates to reflect new science and changing social standards. As a result, the land application of biosolids is the most regulated of agronomic nutrient sources available in Virginia. We encourage the continued review of current science and its applicability to the biosolids use regulations.

Commenter: Wagner, Steve, representing Farmers

I have been using biosolids on my farms for approximately four years. After several applications I have seen marked improvement on the productivity of my pastures and hay fields. My cattle do well on the forage produced from biosolids applications and the overall profitability of my farms depends upon it. The biosolids application process seems to be working well - leave it alone. Biosolids are a recycled product. What could be more environmentally friendly than applying our own wastes back to the land? It has been done in European countries for years. Farms are disappearing because of economic pressures. Biosolids application can be the difference in keeping our rural landscape intact. I believe this benefits all

Virginians. I have spoken with many of my neighbors about the use of biosolids near their property and never have had any adverse reactions or comments. Most of them want it on their gardens. In your regulatory approval of this process I hope that the committee will see that we are on the right track with continued biosolids application.

Commenter: Wellons, Harry, representing Farmers

We have been using biosolids on our farm since 2006. As a landowner there is no one that is more interested in the health of our property and the condition of the land. Daily our cattle recycle waste on the fields maintaining the fertility of the land. It is also a biosolids. Since we have been using biosolids we have seen an improvement in the condition of our fields with little if any effect on water quality. The main waterway that passes through our farm, Buck Mtn. Creek has some of the best quality water as monitored by local agencies. The company that spreads the biosolids is careful to maintain appropriate buffers and avoid critical slopes and will not cross waterways with their equipment. Human waste has been used for centuries in some countries such as China. I see no reason why it should not be used here with reasonable oversight and monitoring as I believe is already being done.

Commenter: Woodright, Cecil, representing Farmers

Have used biosolids on my farm for 8 years. Have done research on the use of biosolids and decided that its used was okay, before I applied biosolids. If biosolids were hazardous we wouldn't have anyone working in sewage treatment plants today. The use of biosolids has saved me a lot of money and has increased the productivity of my fields and have increased my hay production.

DEQ Response to Comments: Support for the Land Application of Biosolids and Proposed Amendments to the Regulation

DEQ acknowledges the comments of those in support of the biosolids program and appreciates their thorough critique of the regulation.

Subject: Testing

Commenter: Atwood, Dennis, representing Shenandoah County Water Resources Advisory Committee

Require DEQ and authorize localities, to include additional testing requirements for biosolids materials to be applied to those sites and for those constituents that fall within the Chesapeake Bay TMDL and storm water management mandates; and for use in analyzing incidents of possible human health impacts.

Commenter: Barker, Maurice, representing Florida Department of Environmental Protection

Why are you proposing to remove the CCE analysis requirement from your regulations?
question to be answered here

Commenter: Burleigh, Mary Ann, representing Citizens

Require DEQ, and authorize localities, to include additional testing requirements for biosolids material to be applied to those sites and for those constituents that fall within the TMDL and storm water management mandates as required by EPA and DEQ for the Chesapeake Bay/James River and other watersheds.

Commenter: Cook, Joel, representing Self

The Department of Environmental Quality should be responsible for carrying out ALL testing of sludge products being offered by companies such as Nutri-Blend to Virginia farmers. This includes testing the quality of the well water of any land within a mile of where sludge has already been applied. The tests should be much more stringent than the testing being presently carried out by these same companies that are offering the sludge to our farmers. The tests should include a list of a great many more toxins and heavy metals than are presently being tested for. Having the same companies who are peddling their sludge to carry-out their own testing is such an obvious conflict-of-interest. The present situation is the proverbial fox guarding the hen house. What the heck is the Commonwealth of Virginia thinking? Your Department of Environmental Quality should perform all tests that should be paid for in its entirety by both the companies offering the sludge to the farmers and the farmers themselves.

Commenter: Coulling, Philip, representing Rockbridge Area Conservation Council

Research to test sludges from sewage treatment plants and commercial sources for the entire universe of possible contaminants is not yet complete, but EPA's recently published evaluation focusing on human pharmaceuticals in biosolids sludges confirms the presence of a growing variety of chemicals that vary between treatment plant sources and even between batches from the same source. Because of the variability over time and source, and complex mixtures of potential contaminants in sludges now documented by EPA's study there is now sufficient basis to support the necessity of fully characterizing all materials to be applied to the land. The current requirements for periodic testing for indicators such as pH, nutrients, and a very limited number of potential contaminants such as metals are inadequate in the light of new findings by EPA of widespread occurrence of not only metals, but pharmaceuticals, steroids, hormones, semi-volatile organics, polycyclic aromatic hydrocarbons, and flame retardants in sludges, and the lack of research for other types of contaminants. Additional requirements are needed in the proposed regulations to test each batch of sludge for a complete suite of metals, pharmaceuticals (human and veterinary), pesticides, solvents, halogenated and other organic compounds including dioxins and PCBs, other inorganic chemicals, biological hazards, and radioisotopes. Requirements for monitoring the environment should similarly be expanded to cover those chemicals found in the materials applied at the permitted location. The permittee should bear the cost of this testing and record keeping and be required to use certified independent laboratories.

Since the ongoing research to fully document the content of biosolids produced by our modern lifestyles is continuing to add to our knowledge of range and concentrations of chemicals that pass through even our best sewage treatment plants, we would urge the Department to review the regulations and active permits frequently to make sure they and the testing required reflect the best science and continue to adequately protect human health and the environment.

Commenter: Davis, Brandon P., representing Shenandoah County

The DEQ should require additional testing requirements for biosolids material to be applied to those sites (adjacent public uses, residential subdivisions and places of assembly) and for those constituents that fall within the Chesapeake Bay TMDL and storm water management mandates; and for use in analyzing incidents of possible human health impacts.

Commenter: Gessner, Mary, representing Friends of the North Fork of the Shenandoah River

Don't think that the analysis of only 9 heavy metals is sufficient to be protective of human health or the environment. We don't know what is in the material. More testing and testing for more metals and chemicals is needed. There is a provision in the regulation that allows for the testing of more parameters. This should be mandatory. There needs to be a more comprehensive analysis of heavy metals. Soil analyses should be done more frequently than 3 years.

Commenter: Graf, Mary, representing Citizens

Regulations need to allocate funds to be used specifically for expanded testing on sludge constituents, effects of the biosolids program on human health and the environment, and other studies that could further protect against risks inherent in the practice of land applying sewage sludge biosolids.

Biosolids cannot be called "nonhazardous", since by definition biosolids refers to pollutants, which by their nature are hazardous. To state that biosolids is nonhazardous is misleading, dishonest, and wrong.

Commenter: Grove, Tim, representing Farmers

The new regulations propose minimum soil test levels of plant available potassium and soil pH as a prerequisite for biosolids application. The idea behind this change makes sense in that application rates are governed by expected crop yields, and that expected crop yields cannot occur if other components of soil fertility are lacking. However, low soil potassium doesn't mean crop failure, and neither does low soil pH. It means reduced yields. For many of these fields in question we are talking about farms that do not the economic means to build soil fertility beyond minimum values. Consider a regulation that cuts the allowed rate to 75% or even half of the full rate for fields with poor soil fertility, but don't ban it altogether. Don't make this a program that judges farm eligibility based on an individual's economic position.

Commenter: Hassan, Khalil, representing Madison County Residents

There is no scientific evidence to prove sludge is safe for public health. The 503 Sludge Rule does not address risks from inhaling lime dust and irritant gases or serious complication when exposed to a combination of pathogens and chemicals. This interaction creates irritant gases that can break down our natural barriers to infection, leaving us more susceptible to pathogens. Studies have indicated that chemicals and toxins in sludge are making their way into the environment and our bodies. Pathways of exposure include airborne dispersion, soil contamination, plant uptake, meat, milk, fish, etc. These deposits are cumulative and do not disappear and may be causing learning, developmental, and other health disorders. Lead is allowed in sludge even though it is banned as an additive to paint and gasoline. Lead can

contaminate soils and leach into the groundwater or may be found in crops grown in contaminated soils, or meats, milk, etc. EPA's own scientists found the 503 Rule to be scientifically indefensible with regard to safeguarding public health and the environment, from heavy metals, organic chemicals, and pathogens in land applied sewage sludge. The USEPA Biosolids Management and Enforcement Audit Report 2000-P-10 states the EPA cannot assure the public that current land application practices are protective of human health and the environment.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

As an example of the consistency review that is necessary, 9VAC25-32-80 H 4 and 9VAC25-32-450 F identify analytical methods that must be used. The analytical methods from 40 CFR Part 503 should also be included so that there is consistency with the federal regulations and also with the methods identified in 9VAC25-31-490.

In several sections of the proposed regulation there is a statement that additional requirements or additional sampling may be imposed by the department "as appropriate". See, e.g., 9VAC25-31-100 K 4 f and g and 9VAC25-32-60 F 2 a (2). Such statements should be deleted from the application provisions. The initial application submitted by an applicant will not yet contain any additional parameters. If DEQ determines that additional sampling is necessary, that is provided for in other sections of the regulations. See, e.g., 9VAC25-31-545 C.

The criteria under which additional requirements or additional sampling could be imposed should be specified in the regulation. For example, 9VAC25-31-460 A authorizes the Board to impose requirements for use of biosolids that are more stringent than the requirements in the VPA Regulations when necessary to protect public health and the environment from "any adverse effect of a pollutant in the biosolids." The regulation should be expanded to include criteria to be applied by the Board in such cases. See also Sections 9VAC25-32-400 A and 9VAC25-32-400 F.

Commenter: Henderson, Jim, representing Citizens

The presence of heavy metals in the sludge has been documented in the Targeted Sludge Survey. Their presence can be spotty due to the nature of the contaminant, however they are present. These pollutants are trapped in the soil and can remain there, poisoning the land for a very long time, and can accumulate each time sludge is spread. It is important to control the soil pH where this contamination has occurred. If the soil becomes acidic (as from acid rain) the metal ions will be mobilized and move into the food chain. These toxic heavy metals, such as mercury and lead, have been shown to have a definite health affect, especially in children. The need to control the pH for decades means that detection, tracking, and pH adjustment must be a government function. The regulations must require DEQ to oversee permanent pH management so metals and other toxic persistent chemicals can't be mobilized, leach into groundwater, or be picked up by plants.

Commenter: Kondis, Dr. Edward F., representing Citizens

DEQ should require soil tests to determine concentrations of the 9 metals regulated by EPA on all fields where sewage sludge is to be spread. Science has proven concentrations of these 9

metals continue to increase in the soil when sewage sludge containing the 9 metals is added to the soil.

Commenter: Laurrell, R. David, representing County of Campbell

Require DEQ, and authorize localities, to include additional testing requirements for biosolids material to be applied to those sites and for those constituents that fall within the TMDL and storm water management mandates as required by EPA and DEQ for the Chesapeake Bay/James River and other watersheds.

Commenter: Lorien, Joy, representing Citizens

Myth: "Natural biology" breaks down the chemicals; "cooking kills the pathogens". Fact: Toxic metals never break down. They accumulate in the soil or are picked up by animals and plants. Treatment inactivates most of the indicator pathogens. But more robust disease-causing pathogens can survive and re-grow, especially if sludge is stockpiled in cool and moist climates. One of the most dangerous emerging pathogens, E.coli0157:H7, can survive the treatment process and survive in soil.

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Commenter: Maurer, Linda, representing Springhaven Agricultural Enterprises, LLC, Madison County

One of the most strenuous objections we've had to sludging is the accumulation of heavy metals in the sludge, not to mention all of the pharmaceutical residues that do not get removed as a result of the processing of sludge at Blue Plains or other facilities. Our research has shown that to do so requires very costly reverse osmosis systems that are not employed by the major waste water treatment plants in the East. These residues do not break down readily enough to be safe for human consumption of animals or grain products produced on sludged land. We've run our own soil tests 6 years ago. Both tests indicated unacceptable levels of lead, mercury, cadmium, and other elements in the soil samples collected.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

Given the largely unknown chemical composition of sewage sludge and the resultant lack of information regarding the fate, transport and effects of these materials, much more stringent regulations are required to ensure the protection of human health and the environment. Sewage treatment plants are not designed to remove many of the chemicals that are currently entering the waste stream - they also end up in the sludge. To ensure the protection of surface and ground water resources, the regulations should require a more complete chemical characterization of sewage sludge. All biosolids permitted for land application should first be monitored for an expanded list of pollutants that are known to occur in sewage sludge. At a minimum, 9VAC25-32-356 should be revised to require biosolids be analyzed for aluminum, barium, beryllium, boron, calcium, manganese and silver (identified by EPA as metals of

concerns in sewage sludge). Given the weight of circumstantial evidence indicating the prudence of including additional chemical analyses and the total lack of scientific evidence to support the safety of these materials, a more conservative regulatory approach is warranted. It is time for the burden of proof to be shifted to require that biosolids be proven to be safe prior to being land applied throughout the Commonwealth.

Soil sample analyses should be required immediately before the application of sewage sludge. Results from a 3-year old analysis (the current requirement) are likely not to be reflective of actual soil conditions at the time of application. If other fertilizer or soil amendments are applied within the 3-year period, the older soil sample results would be meaningless.

Commenter: Parker, Diana, representing Citizens

Localities should be able to apply strict testing and challenge to unsafe biosolids and be reimbursed.

Commenter: Sligh, David, representing Riverkeepers

Huge amounts of arsenic have already been deposited on crop land, pastures, and orchards throughout the Karst regions of Virginia, through pesticide spraying and land-application of poultry waste. Tons of arsenic-based pesticides were applied to orchards and other crops throughout the Great Valley of Virginia, where Karst predominates, from the late 1800s to the 1970s with no regulation and only very recent and limited sampling to assess its prevalence and effects. These limited studies demonstrate that remnants of that pesticide use persist in great concentrations in some areas and pose significant threats to the present day. Application of poultry waste to the same Karst regions of Virginia also presents a significant threat. Despite the knowledge that poultry waste applied in Virginia often contains arsenic, the DEQ has refused to require monitoring for this pollutant in the poultry waste or in the soils to which it is applied. These facts cause special concern, because arsenic is considered by the EPA to be a cancer-causing agent (a carcinogen) and researchers have also shown arsenic to be an endocrine disrupting chemical. Given all of these factors, DEQ's proposal to continue to allow land-application of arsenic-laden sludge to fields in Karst areas seems reckless. That DEQ has provided no evidence or predictions as to where this carcinogen or other harmful chemicals in sludge will go or how they will affect the environment or humans when stored and managed as allowed by this regulation, also seems irresponsible.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The Board is authorized to increase the fee if the amount is not sufficient to ensure that health and the environment are protected. That includes reasonable testing costs to ensure the same. Thus the only cap must be the reasonableness of the proposed tests. Language is required to ensure that there will be reimbursement for reasonable testing as follows: "All reasonable costs to test sewage sludge shall be reimbursed. Reasonableness shall be directly related to the extent that DEQ has otherwise ensured that health sensitive individuals will not be exposed and pollution sensitive sites identified and properly buffered out. The constituents tested for shall not be limited to heavy metals and nutrients. If the funds are not adequate to reimburse those reasonable costs, the Board shall increase the fee as needed to provide such reimbursement."

The Code's reimbursement provision was requested by citizens because VDH refused to consider testing for more than a few heavy metals and nutrients, even following health complaints. Following adoption of the reimbursement requirement, VDH refused to consider reimbursement for testing of any additional constituents in sewage sludge, effectively mooting the Code's requirement. DEQ's current policies and practices indicate that it will follow VDH's lead and refuse to reimburse local governments for testing as required by § 62.1-44-19:3G of the Code. The number of constituents to be tested for is directly impacted by the extent to which DEQ's regulations otherwise ensure (1) that health sensitive individuals are not exposed to constituents that may be in any given sewage sludge and (2) the extent to which pollution sensitive sites have been identified and eliminated. If DEQ fails to ensure that health sensitive individuals are not exposed, then testing for any constituent (that could reasonably be present) that medical professionals believe could adversely impact health must be reimbursed. Similarly, if DEQ fails to ensure that no constituents could enter into surface or underground water, then all constituents that could reasonably be present that could harm the environment must be reimbursed. At a minimum, the regulations must be amended to clearly provide for reimbursement for reasonable testing when DEQ fails to undertake such testing to ensure that health is protected. Language must be added to Section 20-148 and might read: "Reasonable expenses for the following types of activities may be submitted for reimbursement, including reasonable costs to test sewage sludge for pathogens, viruses and other constituents that could explain health and environmental complaints: Charges for sewage sludge and soil sample testing costs."

Until adequate testing and appropriate studies, the Code requires a precautionary approach to protecting health and the environment. Testing sludge constituents is an important tool in determining the extent to which the regulations ensure that health and the environment are protected. DEQ refuses to test land-applied sewage sludge, even when health complaints follow a particular land application. The draft regulations fail to provide for either spot checking to see if the regulatory restrictions are met; or to determine what might be in a particular sludge following health complaints. It cannot be argued that DEQ has inadequate resources or funding as the SWCB is authorized to increase fees as needed to ensure that health and the environment are protected. As long as DEQ refuses to undertake needed testing, in order to ensure that health and the environment are protected, it must take a precautionary approach with respect to exposure of humans and applications on sites that may be pollution sensitive. This would include ensuring that health sensitive individuals are not exposed and pollution sensitive sites are sufficiently identified and excluded.

Because the sewage sludge contains heavy metals, in certain circumstances it is necessary that pH be maintained in perpetuity at levels sufficient to keep heavy metals from leaching into groundwater. That responsibility falls on the Permit Holder. However, the regulations fail to make that clear, much less how that requirement will be enforced in the future, unless it is recorded as an obligation against the land. Thus the following language must be added to the regulations: "Permit Holders are responsible to ensure that all obligations that result from land application of sewage sludge are fulfilled. Permit Holder shall submit annual reports that include certifications that all continuing obligations have been and are being fulfilled. These obligations shall be recorded as an obligation against the land."

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

If DEQ continues to press the need for additional management measures relating to molybdenum, VAMWA would suggest, as an alternative to the reduced ceiling concentrations, requiring land appliers in livestock grazing areas to notify farmers with grazing cattle if the molybdenum content of the biosolids is between 40 and 75 mg/kg. This would allow an individual farmer to make the decision regarding how to manage his cattle. Although VAMWA believes such a notification requirement is unnecessary, we would support it in lieu of reducing the molybdenum ceiling for livestock grazing areas to 40 mg/kg.

In several sections of the proposed regulation there is a statement that additional requirements or additional sampling may be imposed by the department "as appropriate". Such statements should be deleted from the application provisions. The initial application submitted by an applicant will not yet contain any additional parameters. If DEQ determines that additional sampling is necessary, that is provided for in other sections of the regulations. Even where the provisions are appropriate, the criteria under which additional requirements or additional sampling could be imposed should be specified in the regulation.

Reducing the ceiling concentration for molybdenum to 40 mg/kg is unwarranted and premature.

The proposed regulations include a ceiling concentration limit for molybdenum of 75 milligrams/kilogram (mg/kg) unless biosolids are applied on land used for livestock grazing 9in which case, the ceiling becomes 40 mg/kg). Although, there is no proposed limit for cumulative loading rates or monthly and annual loading rates, each table is footnoted as follows: "The monthly average concentration is currently under study by the USEPA." VAMWA opposes any reduction in the ceiling concentration for molybdenum. The proposed change would likely devastate the land application program of one VAMWA member (75% of its current fields are used for livestock grazing) and could significantly impact another member. VAMWA requests that DEQ delete the 40 mg/kg reference and the references to molybdenum in the cumulative loading rate tables. VAMWA notes that the federal ceiling concentration for molybdenum is 75 mg/kg. The state's proposal to reduce the molybdenum ceiling for livestock grazing areas is premature. DEQ should wait until EPA actually performs a scientific analysis before amending the regulations. VAMWA is unaware of any problems in Virginia with cattle that feed on land that has received biosolids. DEQ's proposal to reduce the molybdenum ceiling concentration would harm biosolids land application in the Commonwealth. If this problem is not corrected, any POTW that has higher levels of molybdenum in its biosolids would be forced to either landfill (at greater expense) or to require its industrial customers to install potentially expensive treatment to reduce molybdenum discharges to the wastewater plant. Given the current economic environment, neither option is acceptable, particularly because this restriction has not been justified.

The proposed regulations require testing for polychlorinated biphenyl congeners (PCBs) pursuant to EPA Method 1668B (Method 1668B) by applicants seeking to add a biosolids

source for land application. The sample results must be included in the permit application or request to add the source. VAMWA is concerned that the proposed language regarding a new source (9VAC25-31-100 Q 7 a; 9VAC25-32-60 F 2 a) would require PCB testing if an existing POTW awards a contract for land application to a different contractor (i.e., this POTW would be a source not previously included in the contractor's permit). This is inappropriate. A new source should be limited to those sources who have not previously been land applied in the state.

The proposed regulations require testing for polychlorinated biphenyl congeners (PCBs) pursuant to EPA Method 1668B (Method 1668B) by applicants seeking to add a biosolids source for land application. The sample results must be included in the permit application or request to add the source. VAMWA opposes the mandated use of Method 1668B, and suggests the following changes to the proposed regulations: "Samples for PCB analysis shall be collected and analyzed in accordance with EPA Method 1668B an appropriate testing methodology adequate to determine whether PCB levels are within limits included herein." Procedurally, VAMWA questions the wisdom of referencing a particular methodology in a set of regulations, due to the probability that future scientific developments will render it obsolete (indeed, Method 1668C has already been developed). VAMWA opposes the mandated use of Method 1668B for the following reasons: It is very expensive as compared to existing testing methods; It is of questionable accuracy and precision; It is not a formally approved EPA testing methodology; and It is unnecessarily sensitive for this regulatory purpose.

Commenter: Szeremet, Richard, representing Madison County Residents

I am opposed to the use of sludge as a fertilizer. The sludge contains pathogens that survive the treatment process. The U.S. Army refuses to purchase produce grown with sludge. The sludge contains all the prescription medicines and antibiotics taken by the population. These compounds end up in the streams causing congenital defects in fish. We are constantly hearing about the attempts to clean up the Chesapeake Bay and applying this sludge in Virginia certainly undermines the efforts to clean up the environment.

Commenter: Winn, William and Barbara, representing Citizens

We feel present testing and storage methods are inadequate. Any provisions preventing the application hold-ups, need some sort of storage regulation provision and accessible recording as well. If the land on which sludge is applied cannot take up beneficial elements why apply it? So we advocate measures be taken to increase the adequacy of testing the land to which sludge is applied - at least a test of soil pH. Foreign materials such as PCBs and feminizing wastes from manufacturing sources need to be tested for, and records, dates done, etc. be available to the public.

We feel present testing and storage methods are inadequate. Anything which would increase the items tested for would be helpful. Any provisions preventing the application hold ups, need some sort of storage regulation provision and accessible recording as well. If the land on which sludge is applied cannot take up beneficial elements why apply it? So we advocate measures be taken to increase the adequacy of testing the land to which sludge is applied - at least a test of soil pH. Foreign materials such as PCBs and feminizing wastes from manufacturing sources need to be tested for, and records, dates done, etc. be available to the

public.

DEQ Response to Comments: Testing

The vector attraction and pathogen reduction sampling and testing regulations are consistent with current EPA 503 biosolids treatment requirements. The metals content and nutrients in biosolids are tested monthly both by the generators and the VPA permit holder for the larger generators. Smaller sized generators are required to test at a reduced frequency. There also are non hazardous waste declarations submitted by the generators for their produced biosolids. All of these biosolids treatment practices are designed to be protective of human health and the environment. While research is an ongoing process, these practices are protective due to their conservative design. Research into “emerging pollutants” is an ongoing process in all permitting programs at DEQ and new criteria are adopted when deemed necessary through the Triennial review process and subsequently incorporated into permits. At this time, EPA has no information regarding new contaminants that has led them to require additional testing or further restrict land application.

In regard to the proposed restriction of biosolids with Molybdenum concentrations of greater than 40 mg/Kg, DEQ has delayed action pending EPA adoption of a molybdenum standard. The amended regulation language addressing molybdenum limits has been revised and moved. “Research suggests that for Molybdenum a cumulative pollutant loading rate below 40 kg/hectare may be appropriate to reduce the risk of copper deficiency in grazing animals” has been placed in the footnotes for the table regarding Cumulative pollutant loading. “Research suggests that a monthly average Molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals” has been placed as a footnote in the table of Pollutant Concentrations.

Subject: [Technical Advisory Committee](#)

Commenter: Trumbo, Susan, representing Recyc Systems

I represent Recyc Systems. We are a permit holder in Virginia and hold several permits for the applications of biosolids. DEQ has convened two groups of experts over the past few years (The Expert Panel and the Technical Advisory Committee). Urge the Board to rely on the recommendations of the Expert Panel and the Technical Advisory Committee when considering the proposed amendments to the biosolids regulations.

Rather than the Department depending on the use of Guidance Documents for clarification, we urge the regulations be complete and concise. The regulations should clearly reflect the expectations of the Department and not be left to interpretation by the permit holder and stakeholders. We request forms such as the Landowner Agreement and Insurance Liability Endorsement be incorporated into the regulations so they are set documents. Definitions of saturated ground and frozen ground should be included in the regulations not left open to interpretation in Guidance Documents and Manuals. Set backs from Public Buildings should be

established clearly in the regulations and not left to Guidance Documents.

Recyc Systems acknowledges the significance of the task undertaken by the Department for a comprehensive review and revisions of the VPDES and VPA biosolids use regulations after incorporation of the VDH biosolids use regulations. We urge the Department to make a thorough and specific review for grammar, terminology and consistency. The importance of clarity and thoroughness cannot be overstated. We urge a review of the organization of the regulations for simplicity and effectiveness.

DEQ has recently issued new guidance documents relating to the biosolids regulatory program. The purpose of guidance documents is to clarify the agency's interpretation of a regulatory program where it is unclear or provide additional detail for use by the regulatory agency in applying its regulations. Guidance documents should not be used, however, to create new requirements or to change longstanding agency interpretations without notice and an opportunity for input from the regulated community. With the regulations currently under development, many of the items that are addressed by the recent guidance should be incorporated into the regulations themselves, allowing for input from the stakeholders. This prevents confusion and conflicting information from being generated.

DEQ Response to Comments: Technical Advisory Committee

DEQ has relied heavily on the discussions and recommendations of the TAC and the Expert Panel when making decisions regarding this regulation. DEQ has also considered the comments of the State Water Control Board, the Virginia Department of Health, the Department of Conservation and Recreation and Virginia's citizens. The experience DEQ staff has gained over the past three and a half years since taking over the program has also influenced the decision making. Through this long process, the main goal of this regulation is to allow the land application of biosolids to take place in a manner that is protective of the environment and the people of the Commonwealth.

DEQ understands the need for as much regulatory certainty as possible. However, it is not possible to stipulate all criteria in the regulation, as site specific circumstances may arise, requiring regulatory flexibility. The guidance that the agency prepares is written for the use of the staff across the state, to ensure consistent implementation and enforcement of the regulation, especially where the regulation does allow for flexibility.

Subject: [Use of the Term "Biosolids"](#)

Commenter: Gibson, Dave, representing Citizens

I urge you to reconsider approving the legislation as proposed. I oppose the proposed amendments pertaining to the regulations on "biosolids" as a concerned citizen of the

Commonwealth and a professional environmental auditor with 30 years of experience. The proposed amendments seem to be driven by generating fees associated with dubious practices rather than the desire to ensure the health and wellbeing of Virginia's citizens. Changing the term "sewage sludge" to "biosolids" 493 times in written law without defining it is disingenuous and confusing.

Commenter: Graf, Charles, representing Citizens

In Virginia, farmers do not need a permit to spread fertilizer. They do need a permit to spread "biosolids", which is toxic waste and not fertilizer. The two terms cannot be used interchangeably. DEQ and the Board should never use the term "fertilizer" with reference to the pollution abatement permit to spread sludge. To do so is a blatant misrepresentation. Also, because the Regulations are based on the EPA Part 503, which is named "The Standards for the Use and Disposal of Sewage Sludge", the term "biosolids" should not be used in the regulations.

Commenter: Graf, Mary, representing Citizens

"Sewage sludge" definition, in addition to domestic septage, should name industrial, hospital, morgue, slaughter house, and municipal runoff waste, as being part of sewage sludge - actually anything that goes "down the drain". Definitions need to be accurate and complete.

Commenter: Hassan, Khalil, representing Citizens

I think you do the DEQ a disservice when your document states that sludge is commonly referred to as biosolids, that may be the case at DEQ and in the sludge industry, but the common term amongst concerned citizens is sludge. Repeatedly doing so gives the appearance that DEQ has lost its objectivity.

Commenter: Johnston, Kathleen, representing Madison County Residents

It seems to be the understanding of at least one Madison County applicant that the sludge to be spread on his land would be "residential" sludge. Does this applicant have any reasonable assurance that the sludge to be spread on his land would be "residential" sludge? What does "residential" sludge mean? Is this a category of sludge that the DEQ recognizes, tests and certifies? Apparently, this applicant believes that such sludge would have fewer heavy metals in it than other types of sludge.

Commenter: Kondis, Dr. Edward F., representing Citizens

The definition change of "sewage sludge" to "biosolids" is inaccurate and incorrect. "Sewage sludge" is well-defined in dictionaries everywhere. "Biosolids" is a misnomer. "Bio" is a prefix meaning "life", and "solids" are the form of matter which are not "liquids" or "gases". "Sewage sludge" as it is spread on Virginia farmland is almost totally "liquids" with some "solids" containing therein. Therefore, calling "sewage sludge" by the name "biosolids" when it is mostly "liquids" is unscientific and ignorant.

Commenter: Land, Dr. Lynton S., representing Citizens

The Code of Virginia (CoV) uses the phrase "sewage sludge" 55 times in §62.1-44.19:3 and states explicitly in §62.1-44.19:3.A.2 "The addition of lime or deodorants to sewage sludge that has been treated to meet land application standards shall not constitute alteration of the

composition of sewage sludge." Clearly it is the intent of the General Assembly to adhere to Federal policy and characterize the human solid waste derived from wastewater treatment facilities as "sewage sludge" and not "biosolids". Neither the Virginia Department of Environmental Quality nor the State Water Control Board have the authority to trump Federal statute or the intent of the General Assembly. The word "biosolids" must be removed everywhere from the Virginia Administrative Code, and on signage, and replaced by the legally binding phrase "sewage sludge".

The Federal Water Pollution Control Act (CWA) of 11/27/02 does not use the word "biosolids" and is explicit in its use of the phrase "sewage sludge," especially in Section 405. VDH had no authority to substitute the word "biosolids" for sewage sludge. The etymology of the word biosolids derives from the waste disposal industry who coined it in an attempt to disguise the true nature of the material. The most "solid" materials of biological origin is wood or bone, so the construction of the word is nonsense.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

It is important that the landowner understands exactly what is being spread on agricultural lands. Using the term "biosolids" throughout the draft regulations to replace "sewage sludge" does not accurately describe what is being spread. It seems an effort to "clean up" what is being applied to farm lands. Everyone understands "sewage sludge" and that is the term that should be used in the regulations.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The regulations must eliminate all references to "biosolids" and provide for the regulation of "sewage sludge". Land application is a preferred disposal method for many sewage sludge generators. To better convince landowners to allow their land to be used for disposal of this waste, the sludge industry came up with the euphemism "biosolids" in order to market the waste as free fertilizer, rather than the nutrient value being the payment for allowing specific sites to be used as waste disposal sites. The Code of Virginia, like the federal statute and implementing EPA regulations, properly address this waste as sewage sludge. Use of the words sewage sludge is a Code requirement. The proposed substitution of the sludge industry's promotional word "biosolids" throughout the regulations is not only contrary to the Code' it also makes more difficult, if not impossible, for the SWCB to issue permits that authorize any lawful land applications. The word substitution and the accompanying lack of clarity, makes it more difficult to ensure that various Code requirements are met, including by way of example: adequate notice to potential sludge victims, the required landowner consent, identification of health sensitive individuals, public awareness of the potential risks and identification of pollution sensitive sites. Unfortunately, VDH made it possible for the sludge industry to drive the regulatory process. Thus the word biosolids was inserted in the Title of its Regulations. The amendment process provided DEQ with the opportunity to correct VDH's improper substitution of the word biosolids. However, the needed corrections were not made part of the draft regulations. Instead, the draft regulations would virtually eliminate the use of the words sewage sludge. The substitution makes it much more difficult for DEQ to carry out its mandate to ensure that health and the environment are protected. The permit process must begin with a clear understanding on the part of landowners that they are accepting sewage sludge not some

so called biosolids fertilizer. Elimination of all references to biosolids must be the Board's first step if the Board intends to issue permits that ensure that health and the environment are protected.

Commenter: Stevick, Stephen M., representing Citizens

In the case of sewage sludge, the purpose of public notification is to advise the public of plans to spread treated sewage sludge at a given site, on a given day or period. The term "biosolids" is, at most, a term the industry uses in lieu of treated sewage sludge. "Biosolids" is not a term commonly recognized by the general public and therefore its use does not constitute public notification. The more commonly recognized term "sewage sludge" is the appropriate description to be used.

DEQ Response to Comments: Use of the Term "Biosolids"

DEQ received comments opposing the change of the word "sewage sludge" in the regulations to "biosolids." "Sewage sludge" is defined in the VPA regulation as a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

The term "sewage sludge" from domestic wastewater treatment facilities as defined in the VPA regulations does not require stabilization of the sludge to be a sewage sludge. The term sewage sludge is neither descriptive nor proscriptive as to the ultimate disposal or beneficial reuse or recycle characteristics; it only speaks to its point of origin from a sewage treatment facility. Generally speaking, if a sewage sludge is not further treated, it is taken to sanitary landfills for ultimate disposal. To land apply the sludges listed above would be an unlawful activity even if the land applier has a VPA permit because the sewage sludge has not been stabilized to Class B biosolids standards. Sewage sludge must be treated in one of the ten currently EPA recognized treatment methods listed in 9VAC25-31-710 and 9VAC25-32-685 to become a Class B biosolids. The majority of the treatment methods contain time and temperature requirements for detention of the sludges for several days at prescribed temperatures in vessels to become a Class B biosolids. The term "biosolids" has become a term of art used to describe a sewage sludge which has received this established level of treatment, and use of the term serves as a useful means to designate between an untreated and a treated material.

In regard to the comment that the term biosolids is misleading to farmers and that biosolids is not fertilizer; the farming community is well aware of the source of biosolids. There is a long history of research documenting the nutrient benefits of using biosolids and to improve crop production and the ability of the organic constituents to improve soil characteristics for agronomic practices. As fertilization of crops is the primary reason that a farmer would desire biosolids to be land applied, and the fact that biosolids will replace much of the commercial fertilizer that would be land applied, reference to the term "fertilizer" is not misplaced.

Subject: [Use of the Term “Board”](#)

Commenter: Graf, Mary, representing Self

In pretty many places, "the board" is designated to take various actions. Some examples include: page 155/line 15, 157/12, 239/4. How does the board get brought into this, since reports are given to DEQ. Would there be a specially called meeting? Could you please clarify how that works?

Use of the term "board" needs to be made more transparent. When it does not refer directly to the Water Control Board, as "board" as defined in the regulations, then the alternate meaning must be clearly stated.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The use of the term "board" versus "department. There are some instances where Board action is desired; but the regulation should be reviewed to ensure that the appropriate terms is used in each section.

DEQ Response to Comment: Use of the Term “Board”

The reference to "board" does not always mean that the SWCB must take an action. The DEQ has certain delegated powers which it can act upon without direct involvement by the SWCB. State Water Control Law prescribes when the board must be involved.

Other Comments Not Categorized

Commenter: Barker, Maurice, representing: Florida Department of Environmental Protection

Why are you proposing to remove the CCE analysis requirement from your regulations?

DEQ Response to Request: The requirement for calcium carbonate equivalent is now included in the table of required parameters to be monitored for lime stabilized biosolids. Further, a NMP would also require analysis of this parameter for appropriate rate calculations to be determined.

Also, can a facility or person give away bulk quantities of Class A EQ pellets (above 90% TS) and not be registered as fertilizer as well as not have to come up with a nutrient management plan? If so, what about the farmer or person who accepts the biosolids? Does this second person (the farmer, land owner, or other third party) have to do anything under the rule?

DEQ Response to Request: Please refer to the response to comment regarding EQ biosolids above.

Commenter: Graf, Mary, representing Citizens

The "Voucher system" used for documentation and recordkeeping needs to either be handled by a third party, or annually audited by a third party.

DEQ Response to Comment: The voucher system is a system for the land applier and truckers to account for loads of biosolids transported; these records must be available to DEQ staff for review upon request.

Commenter: Hatcher, Roger, representing Farmers

My proposal is simple: 1. Continue the main effort of DEQ in assuring that once biosolids leave the POTW they are of agricultural quality; 2. Expand the CREP and TMDL programs beyond their primary goal of fencing cattle out of streams and encouraging rotational grazing. A reasonable and simple solution is to require buffers of native vegetation, such as bluestem, gama and switch grasses where water flows gently off fields. Where water flow is more concentrated, require ponds or sediment ponds per VDOT specifications. These solutions are permanent and low maintenance. A big added benefit of this approach will be the recovery of quail and other small game populations; 3. Redirect efforts of enforcement staff to create a classification of farms that are nutrient and sediment runoff-free. Farms that agree to participate would be exempted from the following aspects of the proposed rules: - Within the limits of the Federal 503 Rule, let farmers decide when, where and how much of the biosolids to use. The timing of fertilizer is very challenging just based on weather conditions; - Eliminate any buffer not mandated by the 503 Rule; - Eliminate prior notification to local neighbors, counties and cities where biosolids will be used; - Eliminate signage requirement, except perhaps permanent plaques stating that biosolids are used and the public should not access the land without permission; - Continue to require nutrient management plans prepared by Certified Nutrient Management Planners trained by the state; - Eliminate preapproval of plans written by Certified Nutrient Planners. Perhaps require updates on their skills or periodic review of their plans. But, eliminate preapproval before the actual use of the biosolids. Let us take this opportunity to make biosolids more readily available. This will demonstrate that Virginia can handle its own nutrient management programs related to farmers.

DEQ Response to Comment: DEQ acknowledges the thoughtful suggestions recommended by the commenter. DEQ is tasked with developing and implementing a regulatory permit program for the land application of biosolids and certain minimum requirements must be regulated. That said, DEQ will also be cooperating with DCR and local soil and water conservation districts in the furtherance of development of Resource Management Plans by farmers who show a desire and willingness to implement additional BMPs on their farms.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Despite the intense work of the TAC and DEQ staff, the regulations need a comprehensive review for proper grammar and consistent terminology. A good proof reading and editing is necessary before the draft is finalized.

The numbering of Parts and Sections should be checked because in some instances the numbers are out of order.

DEQ Response to Comment: DEQ thanks the commenter for his review. Staff has made many corrections since the initial proposal and continued to check for errors in the final review.

Commenter: Henry, Mark, representing Citizens

This topic might not be very kawaii or so cute but it's still important and should be discussed.

DEQ Response to Comment: DEQ thanks the commenter for sharing his thoughts and ideas.

Commenter: Thompson, Mark, representing Citizens

This topic might not be very kawaii or so cute but it's still important and should be discussed.

DEQ Response to Comment: DEQ thanks the commenter for sharing his thoughts and ideas.

Regulatory Citations

9VAC25-20-142

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-20-142 of the proposed permit fee regulations impose an additional \$1,000 annual permit maintenance fee, on top of the current VPDES permit maintenance fee, for major municipals for land applications of biosolids or land disposal of sewage sludge if the activity has occurred in the 12 months preceding the maintenance fee due date. This additional permit maintenance fee should be eliminated because it lacks statutory authority. DEQ has provided no justification for requiring a VPDES permittee to pay an additional \$1,000 permit maintenance fee for the authorization of land application or land disposal of biosolids. Given the lack of a statutory basis for the \$1,000 maintenance fee for the authorization of land application of biosolids or land disposal of sewage sludge, HRSR requests removing that provision from 9VAC25-20-142(A)(1).

DEQ Response to Comment: DEQ's authority to assign permit fees for biosolids permits is established in §§ 62.1-44.15:6 and 62.1-44.19:3 of the Code of Virginia. The VPDES biosolids maintenance fee was proposed in an effort to reconcile the two statutes and maintain consistency between VPA and VPDES biosolids permits. DEQ recognizes the fact that a substantial maintenance fee is already charged for VPDES permits, and reconciling the two statutes was improved in the final regulation. In the final regulations, the maintenance fee for VPDES permitted facilities has been struck.

9VAC25-20-146 B 1

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-20-146 B 1 - "The fee shall be \$7.50 per dry ton of biosolids land applied in the Commonwealth of Virginia." - The \$7.50 per dry ton should not apply to EQ Class A biosolids distributed in Virginia. This fee will be cost prohibitive to companies that distribute these EQ products in the state. It will also remove some incentive for WWTPs in VA to further process their solids to meet EQ standards. We recommend this be revised to read, "The fee shall be \$7.50 per ton of biosolids land applied in the Commonwealth of Virginia except when the biosolids meet ceiling concentrations in 9VAC25-31-540 B 1, the pollutant concentrations in 9VAC25-31-540 B 3, the Class A pathogen requirements in 9VAC25-31-710 A, and one of the

vector attraction reduction requirements in 9VAC25-31-720 B 1 through B 8."

DEQ Response to Comment: There is no fee for land application of EQ biosolids. The section of the fee regulation that exempts EQ biosolids from the fee is located in 9VAC25-20-50. Exemptions. This section was not included in the NOIRA because no changes were proposed.

9VAC25-20-147

Commenter: Gibson, Dave, representing Citizens

Given what we don't know, but are quickly learning about the long-term risks and toxicology associated with land applications of biosolids, we must ensure better documentation and traceability of food coming from lands treated with biosolids. The current system does not require careful documentation of the chain-of-custody of food produced from lands where biosolids have been applied which reduces the State's ability to recall products when problems are identified.

DEQ Response to Comment: DEQ has developed and maintains a data base of all land application activity, including land application site location and biosolids source. The reporting required by 9VAC25-20 is solely for the purposes of determining the land application fee due and billing.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

During the TAC process, an issue was raised about multiple permits being issued for the same parcel. In an effort to address this, a proposal was made to establish a control number for given fields. This proposal is reflected in 9VAC25-20-147. Additional clarification is needed though. For example, how will control number delineation and implementation work? This could impact combining of fields, splitting of fields, issuance of number and change in contractor/land applier. Although the regulation may not be the best place to resolve these details, at the very least guidance is needed to flesh out how the process will work. There is also a question about how long it will take to receive a control number and when they will be issued. It may be helpful to issue control numbers prior to permit issuance so that the applicators can include the control number on daily paperwork and ticket signing in the field. The regulation should further clarify that only one entity can hold a permit on a field at a time.

DEQ Response to Comment: New language has been proposed to allow the permittee to use the current field ID number in the permit application until a DEQ control ID has been assigned. A control number is assigned when the sites are placed in the GIS database at the time of permit application or request to add land. The overlap duplication of sites will be recognized at that time.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-20-147 A 2 - "Identification of land application site, including DEQ control number." - We would recommend getting clarification of control number delineation and implementation. How will this affect combining of fields, splitting of fields, issuance of number, and change in contractors/land applier?

DEQ Response to Comment: New language has been proposed to allow the permittee to use the current field ID number in the permit application until a DEQ control ID has been assigned

Commenter: Trumbo, Susan, representing Recyc Systems

"5. Dates and type of any interactions with local monitors and names of individuals involved in the interaction." Support striking this requirement as it is too broad and burdensome.

DEQ Response to Comment: This requirement was struck in the first proposal and will remain so in the final.

9VAC25-20-147 A

Commenter: Gibson, Dave, representing Citizens

Several recent studies including EPA work on residual impacts of Perfluorochemicals after application of municipal biosolids indicate that retention of biosolids application documentation should be maintained by the applier, supplier and DEQ for at least 10 years is prudent. Neither "biosolids" nor "sewage sludge" are on the USDA National Organic Program list of Approved Substances. It is important that consumers be able to identify food products associated with the use of well-defined biosolids.

DEQ Response to Comment: DEQ has developed and maintains a searchable data base of all land application activity, including land application site location and biosolids source

9VAC25-20-147 B

Commenter: Gibson, Dave, representing Citizens

The current biosolids permitting and application process does nothing to ensure meaningful traceability of biosolids which will allow detection elimination on non-conforming products or suppliers. DEQ should be setting specifications for a standardized traceability system which indicate the originating treatment plant(s), the source of sewage treated and processed, the date of release from the plant(s) and mixing should be maintained through a Batch and Lot numbering system. Such a "chain of custody" is essential for authorities to be able to trace-back and recall biosolids products which have undesirable biological, chemical or physical properties.

DEQ Response to Comment: DEQ has developed and maintains a data base of all land application activity, including land application site location and biosolids source. The reporting required by 9VAC25-20 is solely for the purposes of determining the land application fee due and billing.

Commenter: Trumbo, Susan, representing Recyc Systems

"8. Reports and notification. The permittee shall submit a monthly report by the 15th of the month following the month that land application occurs, unless another date is specified in the permit in accordance with 9VAC25-32-80." Object to the allowance for the reporting date in the permit to govern. This allowance would cause for inconsistency in reporting dates. Delete "unless another date is specified in the permit in accordance with 9VAC25-32-80".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This is standard language, which is also used in the VPDES regulation that allows another reporting date to be established on a case by case basis if necessary. The standard Permit template will include the reporting date of the 15th. This gives DEQ flexibility to allow another reporting date where required.

9VAC25-20-147 C

Commenter: Gibson, Dave, representing Citizens

DEQ's permitting documentation is inadequate to allow traceability. The basic elements of food safety have not been incorporated into the proposed system and the State should be held accountable for breaches in food safety stemming from improper documentation and inability to identify non-conforming product.

DEQ Response to Comment: DEQ has developed and maintains a data base of all land application activity, including land application site location and biosolids source. The reporting required by 9VAC25-20 is solely for the purposes of determining the land application fee due and billing.

9VAC25-20-149

Commenter: Parker, Diana, representing Citizens

I object to the added requirement in 9VAC25-20-149 that DEQ must give prior approval to inspection by the locality for reimbursement, and electronic means are not permitted. In the age of electronic tax returns and electronic signatures, why not? The time frame for reimbursement seems unduly fast, and simple errors and resubmission too strict for reality. Considering the leeway given contractor submission, why is reimbursement documentation by localities so harshly targeted and so easily denied? Testing should be allowed by localities for elements not currently restricted by DEQ, with DEQ notified for elevated elements that may be cause for concern by the locality for removal. Give localities tools to defend their people.

DEQ Response to Comment: Prior approval is not required for inspections, and prior approval of reimbursement requests is only required only for costs that exceed \$2.50 per dry ton land applied during the reimbursement period. At this time the department is not capable of receiving electronic signatures. The county has 30 days from the end of the month in which they incurred the costs to submit their reimbursement request; e.g. the monitor could inspect on May 2 and submit his reimbursement request on June 30. Land appliers are required to submit monthly reports by the 15th of one month for the previous month. No claim has been denied to date. § 62.1-44.19:3.I states: Any county, city or town may adopt an ordinance that provides for the testing and monitoring of the land application of sewage sludge within its political boundaries to ensure compliance with applicable laws and regulations, therefore they can only be reimbursed for sampling parameters that are regulated.

9VAC25-20-20

Commenter: Gibson, Dave, representing Citizens

The term "sewage sludge" is summarily replaced with the term "biosolids" without defining the difference. The term "biosolids" is not included in 9VAC25-31-10. Definitions. The proposed regulations should clearly indicate the difference between "biosolids" derived from human sewage and industrial wastes and those from common composting and manuring practices. All biosolids are not created equally and to suggest otherwise confuses the risks and public information.

DEQ Response to Comment: Biosolids is the sewage sludge that results from domestic sewage after extensive treatment to meet at minimum, Class B Pathogen Reduction Standards, Vector Attraction Reduction Standards and Metals limits as specified by EPA 40CFR Part 503. DEQ receives test results monthly from the land appliers. Some WWTPs do receive wastewater from industrial facilities within their municipality. By law, industrial facilities that send their wastewater to a wastewater treatment plant (WWTP) must pretreat their wastewater

to meet certain standards. One of the most important pretreatment processes is the removal of metals at the industrial facility, so that the metals do not enter the WWTP.

9VAC25-20-60 A 4

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

An annual maintenance fee is required by 9VAC25-20-60 A 4. The fee should be due within 60 days after receiving an invoice from DEQ rather than having an October 1 date.

DEQ Response to Comment: October 1 is the date that was established for the maintenance fee for all permit types in § 62.1-44.15:6.B2

9VAC25-20-60.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-20-60 A 4 - "Permit maintenance fees shall be paid to the board by October 1 of each year..." - We recommend that the language read that permit maintenance fees be paid by October of each year after receiving an invoice from DEQ.

DEQ Response to Comment: October 1 is the date that was established for the maintenance fee for all permit types in § 62.1-44.15:6.B2

9VAC25-20-60 D - "...The department may bill the land applier for amounts due following the submission of the monthly land application report. Payments are due 30 days after receipt of a bill from the department..." - We would like to see the payments due 60 days after the receipt of the bill to ensure that we can get the checks returned on time and have adequate time to process the checks.

DEQ Response to Comment: October 1 is the date that was established for the maintenance fee for all permit types in § 62.1-44.15:6.B2

9VAC25-31-10

Commenter: Razik, Al, representing Maryland Environmental Services

It appears that the definition of Publicly Owned Treatment Works (POTW) is listed twice.

DEQ Response to Comment: Deleted the definition that was out of alphabetical order.

Commenter: Trumbo, Susan, representing Recyc Systems

"Land application area means land under the control of an AFO owner or operator, that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied." Why is this definition limited to land owned or operated by an AFO?

Recommendation: Replace AFO with "farm".

DEQ Response to Comment: Added definition for "Land application area" to 9VAC25-31-500 and 9VAC25-32-10

9VAC25-31-10

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The definitions (9VAC25-31-10) do not include a definition for "biosolids", although a definition for "sewage sludge" is included. Also, the definition of "land application area" refers to land on which "manure, litter or process wastewater from the production area may be applied." Is this also an area on which sewage sludge or biosolids may be applied?

DEQ Response to Comment: Added "Biosolids" definition to 9VAC25-31-10; it was in 9VAC25-31-500. Added definition for "Land application area" to 9VAC25-31-500 and 9VAC25-32-10

9VAC25-31-100

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The proposed regulations require that the application include a site map depicting certain features within 1/4 mile of the site boundary. The term "site" is defined later in the regulations as "the area of land within a defined boundary where an activity is proposed or permitted." In the context of this requirement, it is not clear whether the "site" refers to the storage facility itself or to the farm on which the storage facility is located. The regulation should specify that the 1/4 mile is to be measured from the actual storage facility, not from the property boundary. Likewise, the requirements in Subsection d for a topographic map showing such things as slopes, drainage ways and depressions should specify the area to which the requirement applies. Again, it would not make sense to require a topographic map for a 500-acre farm with a storage facility located in the middle.

DEQ Response to Comment: This language is based on 40CFR part 122.21 that identifies requirements for NPDES (VPDES) permit applications for biosolids land application. This requirement is specific to the WWTP facility and any offsite storage facilities.

9VAC25-31-100 7.a. Application for a permit

Commenter: Razik, Al, representing Maryland Environmental Services

MES agrees with DEQ that sampling for PCBs is appropriate.

DEQ Response to Comment: DEQ acknowledges the support of the commenter.

9VAC25-31-100 Q 9 c

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Information regarding transport equipment could change with the purchase of new equipment or with a new contractor. The same is true for the voucher system which could be contractor-specific. In addition, the requirement for hauling routes is already included under 9VAC25-31-100 Q 9 c and 9VAC25-32-60 F 2 d (4). VAMWA requests that DEQ: (i) require that specifics regarding biosolids transport be addressed in the O&M manual and not as part of the permit application, and (ii) strike the requirement for hauling routes, as this is redundant with other parts of the regulation.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language regarding the hauling equipment has been revised and the haul route language has been deleted from the transport section and remains with the land application site description in 9VAC25-31-100.Q and 9VAC25-32-60.F

9VAC25-31-100 Q 9 d (4)

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

9VAC25-31-100 Q 9 d (4) and 9VAC25-32-60 F 2 d (12)(d) reference the term "land treatment area," which we recommend replacing with "land application site" as the terms are not interchangeable.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however no changes have been made. "Conventional land treatment" is described in the SCAT Regulations as treatment utilizing "a secondary process for pretreatment of sewage followed by irrigation, overland flow, or infiltration-percolation (or combination thereof) methods for applying treated effluent to an approved site".

9VAC25-31-100.Q.13

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires haul routes to the land application sites, hauling vehicle specifications, biosolids offloading procedures, spill response plans, and a description of a voucher system recordkeeping. The required standards for hauling routes, transport vehicles and spill response are in the VPA regulations under 9VAC25-32-540 Transport. Types of vehicles used for transport of offloading and voucher systems can change with the hiring of a new contractor. It is much more efficient to place this information in the biosolids operations plan which can be updated as needed rather than in a permit application. Hauling routes are not required information under the VPA permit application requirements (9VAC25-32-60) and therefore, should be deleted from the VPDES permit application requirements.

DEQ Response to Comment: This section of the permit application is one part of the Operations Management Plan, and modifications to the plans shall be submitted to DEQ for approval as part of the plan. Other parts of the plan include the O&M manual and the NMPs for each site. VPA requires the "means of transport or conveyance" and has the same language in 9VAC25-32-60.F.4

9VAC25-31-100.Q.14.a(1)

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section should be deleted as it refers to routine storage which is not a part of field operations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage.

9VAC25-31-100.Q.14.a(2) & (3)

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This language should be deleted in deference to the 9VAC25-32-550 and 9VAC25-32-545 of the VPA regulations which list the requirements for storage and staging. These are part of the operating procedures and would be better suited for the O & M Manual.

DEQ Response to Comment: This is part of the operations management plan. These procedures should already be in place for permit applicants who have been operating prior to applying for the VPA permit.

9VAC25-31-100.Q.14.b(1) & (2)

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This language would be better suited for the O & M Manual rather than the permit application. In fact, the calibration and maintenance of equipment is a required element of the O & M Manual (9VAC25-32-410.B).

DEQ Response to Comment: This is part of the operations management plan. These procedures should already be in place for permit applicants who have been operating prior to

applying for the VPA permit.

9VAC25-31-100.Q.16

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section references a surface disposal site. There is no definition of surface disposal site. It is recommended that the term be included in the definitions section of the regulations for clarification purposes.

DEQ Response to Comment: Surface disposal site is defined in 9VAC25-31-500. "Surface disposal site" means an area of land that contains one or more active sewage sludge units. Sewage sludge unit is also defined: "Sewage sludge unit" means land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include surface waters.

9VAC25-31-100.Q.7 d

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires that EPA Method 1668B be used in analyzing PCBs in the biosolids. HRSD opposes the mandated use of this method, and suggests the following changes to the proposed regulations: "Samples for PCB analysis shall be collected and analyzed in accordance with EPA Method 1668B an appropriate testing methodology adequate to determine whether PCB levels are within limits included herein." Procedurally, HRSD questions the wisdom of referencing a particular methodology in a set of regulations, due to the probability that future scientific developments will render it obsolete (indeed, Method 1668C has already been developed). Furthermore, HRSD opposes the mandated use of Method 1668B for the following reasons: it is very expensive as compared to existing testing methods; it is of questionable accuracy and precision; it is not a formally approved EPA testing methodology; and it is unnecessarily sensitive for this regulatory purpose.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been changed to use method approved by 40 CFR Part 136 or 40 CFR Part 503.

9VAC25-31-100.Q.9 (13).d

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section lists requirements for land application sites that will be receiving frequent application of biosolids. It is recommended that this information be limited to a site receiving frequent applications at greater than 70% of the agronomic rate. Furthermore, paragraph (4) references the term "land treatment area" which is not the same as a land application site.

DEQ Response to Comment: This language has been removed, as the NMP will dictate application rates and frequency

9VAC25-31-100.Q.9.c

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires an excess of maps for a land application site permit application. Some of the requested materials are extensive and seem more appropriate for a nutrient management plan (NMP). For example, the application requires four maps - a topographic map, a tax map, a transport map, and a soil survey map. Since DEQ will be assigning a specific control number to the site, it is recommended that the requirement for a tax map be deleted. The requirement for a transport map is premature, especially for the VPA permit, as the applier may

not know the source of the biosolids that will be applied on that particular site. It is recommended that the transport map requirement be deleted. It is recommended that the soil survey map be included in the NMP instead of the application.

DEQ Response to Comment: Based on experience with permit applications submitted since the program was transferred to DEQ, it has been determined that these maps are required for accurate permitting. The topographic map depicts the lay of the land and features that will affect where the biosolids can be applied; the tax map is used to determine the boundaries of the property that is legally authorized to receive biosolids; the transport map is required so that it will be available for public review at the public informational meeting; the soils map is needed for DEQ staff to evaluate the field's suitability for land application.

9VAC25-31-100.Q.9.c(11)

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This contains a requirement that is not applicable to a land application site. The permittee may not know at the time of the permit application submittal which vector attraction reduction will be used for the land application operation. This would be a more appropriate requirement for the monthly activity reports that are submitted to DEQ.

DEQ Response to Comment: This is based on the federal regulation. The land applier must be prepared to meet VAR in the field in an emergency situation where biosolids have been land applied and VAR was not met at the plant. They should know if the fields are eligible to be incorporated, and if they or the farmer has the needed equipment to incorporate the sewage sludge within 6 hours.

9VAC25-31-100.Q.9.c(12)

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This requirement does not apply to the land application site permit application. It would be more appropriate for a storage facility.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. There may be situations where this information would be required to determine adequacy of proposed land base for plant production.

9VAC25-31-440 - Permits and direct enforceability

Commenter: Trumbo, Susan, representing Recyc Systems

"B. Nothing in this part precludes another state agency with responsibility for regulating biosolids or sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use of biosolids or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use of biosolids or disposal of sewage sludge." Object to the general delegation of authority to other agencies to regulation biosolids. Recommendation: Replace this language with the following: "Nothing in this part shall preclude any state agency or political subdivision from exercising its authority to regulate biosolids to the fullest extent of such authority."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to say: Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.

9VAC25-31-460 A

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

9VAC25-31-460 A authorizes the Board to impose requirements for use of biosolids that are more stringent than requirements in the VPA Regulations when necessary to protect public health and the environment from "any adverse effect of a pollutant in the biosolids." The regulation should be expanded to include criteria to be applied by the Board in such cases. Note also that this section should be corrected to read "Microbial testing may be necessary to document the Class A sludge treatment given the reference to the log mean of 9 or more samples while the standard for Class B sludge treatment is the geometric mean of 7 samples."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, and understands the need for as much regulatory certainty as possible. However, it is not possible to stipulate all criteria in the regulation, as site specific circumstances may arise, requiring regulatory flexibility.

9VAC25-31-460 B

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Although we agree that the regulation does not restrict the ability of other state agencies or political subdivisions from imposing additional requirements under certain circumstances, the regulation cannot confer authority on localities or agencies. Accordingly, 9VAC25-31-460 B and 9VAC25-32-315 B should be amended to read "nothing in this part shall preclude any state agency or political subdivision from exercising its authority to regulate biosolids to the fullest extent of such authority."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to say: Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.

9VAC25-31-460 B

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Although we agree that the regulation does not restrict the ability of other state agencies or political subdivisions from imposing additional requirements under certain circumstances, the regulation cannot confer authority on localities or agencies. Accordingly, 9VAC25-31-460 B and 9VAC25-32-315 B should be amended to read "nothing in this part shall preclude any state agency of political subdivision from exercising its authority to regulate biosolids to the fullest extent of such authority."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to say: Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.

9VAC25-31-475 - Local Enforcement of Sewage Sludge Regulations

Commenter: Trumbo, Susan, representing Recyc Systems

"A. In the event of a dispute concerning the existence of a violation between a permittee and a locality that has adopted a local ordinance for testing and monitoring of the land

application of sewage sludge and a permittee concerning the existence of a violation biosolids,..." Suggest that any locality be allowed to enforce the regulations rather than only those that have adopted a local ordinance. Recommendation: Delete the requirement for the locality to have a local monitoring ordinance.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language is from § 62.1-44.19:3.2.B

9VAC25-31-485

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-485 B 1 - "1. Permit holders shall use a unique control number assigned by the department as an identifier for fields permitted for land application." - The unique control number per field results in significant implementation issues related to timing/use of number and computer software issues of such a number. Can the Department clarify how the number will be used, for example it is to establish a unique identifier for each site or each field? How long will it take to receive? How will this affect field splits, applications to less than an entire field, change in contractors, change in fields size/boundary that result over time in normal farming operations, etc. What happens when several tax numbers covers more than one field? We recommend that the control numbers be received prior to permit issuance so that they can be included in site books for recordkeeping activities. Will the department be equipped to readily provide detailed maps should a field pass from one generator to another or one land applier to another? Also another item should be added that states that only one entity can hold a permit on a field at a time. We do not support the establishment of a control number that results in an inability to support agricultural operations over time or in an inefficient manner.

DEQ Response to Comment: New language has been proposed to allow the permittee to use the current field ID number in the permit application until a DEQ control ID has been assigned. A control number is assigned when the sites are placed in the GIS database at the time of permit application or request to add land. There overlap duplication of sites will be recognized at that time.

9VAC25-31-485 B 2 - Landowner agreements - In the landowner agreement the site restrictions should reference the regulations not the permit as landowner agreements are obtained during the process of permitting fields for land application. We propose to add the language as follows: "Landowner agreements shall include an acknowledgement by the landowner of any site restrictions identified in the regulations." The current language says, "Landowner agreements shall include an acknowledgement by the landowner of any site restrictions identified in the permits." Landowner agreements are obtained during the permitting process before additional site restrictions are identified.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, that correction has been made.

9VAC25-31-485 D 1 - "1. At least 100 days prior to commencing land application of biosolids at a permitted site...The notice shall identify the location of the permitted site and..." - We recommend that it read that 100 day notice is given prior to commencing land application at proposed permitted site. This will keep us from waiting an extra 100 days from the time we receive the permit to the time land application can occur. We recommend to delete the word "permitted" and replace with "proposed" so that an extra 100 days is not added to an already

lengthy permitting process. Currently we send out the notice when we get the draft so that we have the new VPA number on the notification.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 D 2 c - "A map indication haul routes on each site where land application is to take place;" - We object to submitting haul routes and request it be deleted in the 14 day notice as information is already provided during the permitting process. It appears the Department is attempting to regulate road use which is already regulated by other governmental agencies.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 F 1 - "F. Posting Signs. 1. At least 5 business days prior to delivery of biosolids for land application..." - Given all the new public notification requirements, we see no added benefit of increasing the notification time from 2 to 5 days.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 H 2 "H. Handling of complaints. 2. For the purposes of this section, a substantive complaint shall be deemed to be any complaint alleging a violation of these regulations, state law, or local ordinance..." - A substantive complaint cannot be based upon local ordinances that are not in agreement with state law. We request that "local ordinances" be deleted or clarified to only include ordinances in agreement with state law.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please refer to the response to comments regarding The Handling of Complaints

9VAC25-31-485 D

Commenter: Gibson, Dave, representing Citizens

9VAC25-31-485 - Requirements for permittees who land apply sewage sludge biosolids - D. Notification requirements: do not require the permittee to notify all immediately adjacent landowners of the intent to apply biosolids. Application of biosolids may materially impact agricultural practices of neighboring landowners, particularly if they are certified organic producers participating in the USDA NOP program. Buffer zones to prevent drift from adjacent farms cannot be properly established unless neighboring farmers are informed of the proposed application a priori.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-31-485 D 2

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-31-485 D 2 to delete reference to "local government": "2. At least 14 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located. The notice shall

include the following:..."

DEQ Response to Comment: The requirement for 14 day notification to the counties was in the VDH BUR regulations. Following DEQ review of the final exempt action to transfer the VDH regulations to the DEQ regulations as well as receipt of inquiries from the counties requesting that this requirement be placed back in the regulation, the requirement was added to the proposed regulation.

Subsections a, d, and g of 9VAC25-31-485 D 2 are redundant (all require contact information for the permit holder), and could be streamlined into a single subsection. Furthermore, we suggest replacing any references to "name, address, and telephone number" with "name and contact information" to accommodate those persons who prefer to be contacted by e-mail.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Those redundancies have been addressed.

9VAC25-31-485 D 2 a

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-31-485 D 2 a to read: "a. The name, address and telephone number and contact information of the permit holder, including the name of a representative knowledgeable of the permit;, at least one individual designated by the permit holder to respond to questions and complaints related to the land application, and the wastewater treatment facility, or facilities, from which the biosolids will originate, including the name or title of a representative of the treatment facility that is knowledgeable about the land application operation:"

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

9VAC25-31-485 D 2 b

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-31-485 D 2 b to read: "b. Identification by tax map number and the DEQ control number for sites on which land application is to take place:"

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

9VAC25-31-485 D 2 c

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Revise 9VAC25-31-485 D 2 c to read: "c. A map indicating description of proposed haul routes to each site where land application is to take place; and"

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

The regulations require land applicators to include in their notice to DEQ and local governments a map "indicating haul routes 'on' each site where land application is to take place." (9VAC25-31-485 D 2 c) Presumably this should refer to haul routes going to the land application sites. If that is the intent, it should be made more flexible, for example, allowing

reference to the most likely haul routes or something similar. This requirement should not create an issue whenever a truck deviates from the route shown on the map. This requirement also appears overly burdensome, as such information is already included in the permit booklets DEQ receives.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-31-485 D 2 c to read: "c. A map indicating description of proposed haul routes to each site where land application is to take place; and"

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

The regulations require land applicators to include in their notice to DEQ and local governments a map "indicating haul routes 'on' each site where land application is to take place." (9VAC25-31-485 D 2 c) Presumably this should refer to haul routes going to the land application sites. If that is the intent, it should be made more flexible, for example, allowing reference to the most likely haul routes or something similar. This requirement should not create an issue whenever a truck deviates from the route shown on the map. This requirement also appears overly burdensome, as such information is already included in the permit booklets DEQ receives.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

9VAC25-31-485 D 2 d

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-31-485 D 2 d - Information moved to revised 9VAC25-31-485 D 2 a.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; please see the response to comments regarding notification.

9VAC25-31-485 D 2 f

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

If DEQ deletes the 14-day notification requirement for local governments, subsection 9VAC25-31-485 D 2 f may be removed entirely. It is unnecessary for a permittee to notify DEQ of the DEQ employees to be contacted in connection with the permit.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification.

9VAC25-31-485 D 2 f & g

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-31-485 D 2 f & g - Information moved to revised 9VAC25-31-485 D 2 a.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 D 3

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-31-485 D 3 to read: "3. The permittee shall deliver or cause to be delivered written notification to the department at least 14 days prior to commencing land application of sewage sludge at a permitted site. The notice shall identify the location of the permitted site and the expected sources of the sewage sludge to be applied to the site by facsimile, electronic mail, or telephone and to the chief executive officer or designee for the local government where the site is located, daily notification prior to on the day of commencing planned land application activities. The notification shall include the approximate date on which land application is to end at the site."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 F - Posting signs

Commenter: Gibson, Dave, representing Citizens

9VAC25-31-485 - Requirements for permittees who land apply sewage sludge biosolids - F - Posting signs: 5 days posting of notification after biosolids application is inadequate to protect public interests. It has been clearly shown that airborne drift of biosolids residues and possible contaminants, and surface water mobility are directly affected by farming practices well beyond the 5 day period. The posting period should not be less than 90 days from application in order to allow affected communities to avoid undesirable exposure.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 F 1 a

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-31-485 F 1 a should specify that signs shall be posted along "public" road frontage.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485 F 1 c

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-31-485 F 1 c should be modified to ensure that localities are not empowered to regulate biosolids signs per se. The intent of this provision, based on the TAC discussions, was to ensure that the regulations did not conflict with general sign ordinances in effect in some localities. As written, it could be construed to allow localities to require additional information, larger signs, longer posting times, etc. Instead, the provision should state that the department may grant a waiver from the requirements where the requirements conflict with local government ordinances and other requirements regulating the use of signs.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485. Requirements for permittees who land apply biosolids.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-485 F 1 c - "F. Posting Signs. 1...c. The department may grant a waiver to the requirements in this section, or require alternative posting options due to extenuating circumstances or to be consistent with local government ordinances and other requirements regulating the use of signs." - We request the signage requirements be consistent for all sites and recommend removal of language that allows areas to adopt more restrictive signage requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this is standard language that allows DEQ to approve other options on a case by case basis if necessary, such as where the regulatory requirements cannot be met, or the county prohibits signs, etc . The standard Permit template will include the signage requirements as stated in the regulation.

9VAC25-31-485.D 2

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires that the local government also be notified 14 days in advance. The State law only requires notification to DEQ which is appropriate. Not all localities have a person dedicated to land application. It is recommended that the requirement for notification to the locality be deleted. Since the local government is contacted during the permit application process, they can request notification as a condition of the permit. This would add value to a notification requirement since the locality would provide a point of contact for the permit holder. The requirements for paragraphs a., d., and g. of 9VAC25-31-485.D appear to be redundant. Since these are VPDES regulations, the permit holder and the treatment facility representative should be the same. It is recommended that the phrase, "name, address, and telephone number" be replaced with "name and contact information", This will allow more flexibility in the method of notification. Paragraph b should be amended to delete reference to the tax map number of the site. The State Code requires that the permittee provide the location of the site and source of biosolids to be spread on the site. It should be adequate to identify the site using the DEQ control number. Paragraph c. should be modified to only require a description of the hauling route as a map is unnecessary. It is recommended that paragraph f. be deleted. Paragraph f. requires the permittee to provide the name of the person in the department connected to the permit. Since the notification is going to the department, it is likely that is the recipient of the notification.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-31-485.D.3

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires daily notification to the local government and DEQ. As discussed in the TAC meetings, it would be more efficient to notify the department when the land application commences but it is not necessary to provide a daily update if the land applier will be at the same site for several days. It is recommended that DEQ be given an estimate of the length of time the applier expects to be operating rather than a daily notification. The TAC also discussed that not all localities have a person dedicated to land application. It is recommended

that the requirement for daily notification to the locality be deleted.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-31-490

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The regulation incorporates methods to be used to analyze samples (9VAC25-31-490). The list included in the regulation appears dated and does not provide for updating/approval of additional methods. This section should include a proviso that methods approved by EPA may be used in addition to those specifically identified in this section.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the regulation does allow for other methods approved by 40CFR Part 136 and SW-846

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-490 B - Analytical Methods - Clarification is needed throughout regulations that specify specific analytical methods. The current language says that these methods shall be used. Analytical methods change over time and we suggest that the regulations account for methodology updates.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the regulation does allow for other methods approved by 40CFR Part 136 and SW-846

9VAC25-31-490.

Commenter: Gibson, Dave, representing Citizens

9VAC25-31-490 - Sampling and analysis - Toxic chemicals, infectious organisms, and endotoxins or cellular material may all be present in biosolids. There are anecdotal reports attributing adverse health effects to biosolids exposures, ranging from relatively mild irritant and allergic reactions to severe and chronic health outcomes. Odors are a common complaint about biosolids, and greater consideration should be given to whether odors from biosolids could have adverse health effects. However, a causal association between biosolids exposures and adverse health outcomes has not been documented. To date, epidemiological studies have not been conducted on exposed populations, such as biosolids applicators, farmers who use biosolids on their fields, and communities near land-application sites. Because of the anecdotal reports of adverse health effects, the public concerns, and the lack of epidemiological investigation, the committee concluded that EPA should conduct studies that examine exposure and potential health risks to worker and residential populations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, and monitors ongoing research conducted by EPA.

9VAC25-31-500

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

The definition should mirror the VPA definition since both regulations address the same activity with regards to biosolids. It is recommended that the VPDES definition state: "land application means the distribution of biosolids by spreading or spraying on the surface of land, injecting below the surface of the land, or incorporating into the soil with a uniform application rate for the purpose of fertilizing the crop and vegetation or conditioning the soil. Sites approved for land application of biosolids in accordance with this regulation are not to be

considered to be treatment works. Bulk disposal of stabilized sludge in a confined area, such as in landfills, is not land application. For the purpose of this regulation, the use of biosolids in agricultural research is not land application."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the definition of "Land application" used in the VPA regulation has been added to 9VAC25-31-500, and clarified to apply to biosolids vs. animal manures.

The VPA definition of "Land applier" should also be in the VPDES regulations. Recommended definition would be, "someone who land applies biosolids pursuant to a valid permit issued by the department in accordance with the requirements specified in the VPA 9VAC25-32-690 through 9VAC25-32-760."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The definition for "Land applier" has been added to 9VAC25-31-500

The VPDES regulation does not include the term "biosolids" in the sentence "having jurisdiction over sewage sludge management..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This sentence refers to all sewage sludge, whether treated to biosolids standards or not.

There is a definition of "use" in the VPA but not in the VPDES. It is recommended that the VPA definition be included in the VPDES regulations in order to differentiate between use and disposal.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the definition for the term "use" has been added to 9VAC25-31-500

This definition should be included in the VPDES regulations in order to differentiate between appliers and generators. The VPA regulations includes the definition is "either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derived a material from sewage sludge."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The definition for "Person who prepares biosolids" has been added to 9VAC25-31-500

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

"Land application" - The VPDES definition should be the same as the VPA definition given that both regulations address the same activity. VAMWA requests that DEQ include the following definition in the VPDES regulations: "'Land application' means the distribution of biosolids by spreading or spraying on the surface of land, injecting below the surface of the land, or incorporating into the soil with a uniform application rate for the purpose of fertilizing the crop and vegetation or conditioning the soil. Sites approved for land application of biosolids in accordance with this regulation are not to be considered to be treatment works. Bulk disposal of stabilized sludge in a confined area, such as in landfills, is not land application. For the purpose of this regulation, the use of biosolids in agricultural research is not land application."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This has been corrected.

9VAC25-31-500

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

"Land applier" - The VPA definition should also be included in the VPDES regulations. VAMWA requests that DEQ add the following definition to the VPDES regulations: "'Land applier' means someone who land applies biosolids pursuant to a valid permit issued by department in accordance with the requirements specified in the VPA 9VAC25-32-690 through 9VAC25-32-760."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The definition for "Land applier" has been added to 9VAC25-31-500

"Municipality" - The VPDES regulation does not include the term "biosolids" in the sentence "having jurisdiction over sewage sludge management..." VAMWA requests that DEQ revise the definition as follows: "'Municipality' means a city, town, county, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under state law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge biosolids management; or a designed and approved management agency under § 208 of the CWA as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in § 201 (e) of the CWA, as amended, that has one of its principle responsibilities the treatment, transport, use, or disposal of biosolids or sewage sludge."

DEQ Response to Comment: This means all sewage sludge, whether treated to biosolids standards or not. No change has been made.

"Person who Prepares Biosolids" - This definition should be included in the VPDES regulations in order to differentiate between appliers and generators. VAMWA requests that DEQ add language to the VPDES regulation that is consistent with the definition in the VPA regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The definition for "Person who prepares biosolids" has been added to 9VAC25-31-500

"Use" - VAMWA requests that DEQ add the definition in the VPA regulations to the VPDES regulation in order to differentiate between "use" and "disposal".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the definition for the term "use" has been added to 9VAC25-31-500

9VAC25-31-505

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-505 D - "D. Surface incorporation may be required on cropland by the department, or the local monitor, with the approval of the department, to mitigate excessive odors, when incorporation is practicable and compatible with a soil conservation plan meeting..." - We suggest adding language to include conservation plan or contract. Presently NRCS is drafting contracts for conservation plans and cost share programs. Also add "or USDA contracts" to capture all forms of conservation restrictions.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, we

added "or contract" as suggested.

9VAC25-31-505 A

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-31-505 A states that DCR approval of a nutrient management plan shall be required prior to board authorization under "specific conditions," but does not specify what those conditions are or make clear whether this requirement relates to the need for a NMP or the need to have such NMP approved prior to board authorization. The regulation should specify who is to make that determination, how the determination is to be made and the criteria for making it. It should also be noted that this language is not included in the biosolids permitting requirements for VPA permits (9VAC25-32-60 F 1 f 3 b).

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Further changes were made to these sections to ensure consistency between the regulations. This language is based on statutory requirement § 62.1-44.19:3.C.8 And 9VAC25-31-505 stipulates:

- a. sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
- b. sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and
- c. other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.
- d. Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site.

Additional oversight for biosolids applications made to high phosphorus soils as well as applications to reclaimed land at higher than agronomic rates is warranted to ensure non-point source nutrient loads are fully evaluated. DEQ is committed to support of the DCR certified nutrient management planner program; and the review and approval process for plans that are written to DCR regulatory specifications should incur little administrative delay. Review of plans that do not meet DCR criteria will result in more accurate and efficient planners.

9VAC25-31-505 A --NMP

Commenter: Smedley, Scott, representing Virginia Biosolids Council

Section 9VAC25-31-505 A states that DCR approval of a nutrient management plan shall be required prior to board authorization under "specific conditions," but does not specify what those conditions are or make clear whether this requirement relates to the need for a NMP or to the need to have such NMP approved prior to board authorization. DCR's Nutrient Management Training and Certification Regulations, which govern the program, were revised in January 2006 and stipulate requirements for certification and criteria for nutrient management plans developed by certified individuals. We believe that since the training and certification programs are regulated and provide adequate training and education to planners, and since certified planners are responsible for the development of nutrient management plans, then the requirement that nutrient management plans be pre-approved by DCR for certain application sites in Virginia is duplicative and unnecessary. This requirement should be deleted.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This

language is based on statutory requirement § 62.1-44.19:3.C.8 And 9VAC25-31-505 stipulates

- sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
- sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed; and
- other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.
- Where conditions at the land application site change so that it meets one or more of the specific conditions identified in this section, an approved nutrient management plan shall be submitted prior to any future land application at the site.

Additional oversight for biosolids applications made to high phosphorus soils as well as applications to reclaimed land at higher than agronomic rates is warranted to ensure non-point source nutrient loads are fully evaluated. DEQ is committed to support of the DCR certified nutrient management planner program; and the review and approval process for plans that are written to DCR regulatory specifications should incur little administrative delay. Review of plans that do not meet DCR criteria will result in more accurate and efficient planners.

9VAC25-31-505 B & D

Commenter: Parker, Diana, representing Citizens

9VAC25-31-505 B & D - I maintain that there should not be long-term storage on site, and that application should include immediate incorporation (not MAY be required) into the soil. Phosphorus to allow the nutrients to be taken in by plants will add to the impacts on the Chesapeake Bay and Southern Rivers.

DEQ Response to Comment: Long term storage is only allowed on constructed pads. Many sites cannot be tilled due to conservation plans. Incorporation results in greater sediment and nutrient deposition in the waterways.

9VAC25-31-505 D

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-31-505 D authorizes incorporation under certain circumstances and when it is compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service. This section should add "or a conservation plan or contract." Currently, NRCS is drafting contracts for conservation plans and cost share programs.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; the phrase "or contract" has been added as suggested.

9VAC25-31-505.C

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section does not delineate between Class A and Class B biosolids. It should be specified that it applies to bulk biosolids meeting Class B pathogen requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This correction has been made

9VAC25-31-505.D

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

The term "excessive odors" should be replaced with the term "malodors" since there is no definition of "excessive odors" but "malodor" has been defined.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This correction has been made

9VAC25-31-510

Commenter: Evans, Kristen Hughes, representing Chesapeake Bay Foundation

CBF strongly opposes the proposal to exempt Class A biosolids from nutrient management plan-based application and management practice requirements (described in 9VAC25-31-550) as proposed in 9VAC25-31-510. All land application of biosolids, without exemption, should be based on nutrient management plan recommendations. All biosolids, whether Class A or B, or exceptional quality, contain nutrients that, if utilized improperly, can contribute to water quality impairments. 1. Language in 9VAC25-31-510 should be consistent with language in 9VAC25-32-570 for bulk distribution of biosolids of exceptional quality. 2. Any individual purchasing more than 5 tons of biosolids material of any quality or treatment level should be required to apply the material according to nutrient management plan recommendations.

DEQ Response to Comment: This language is from 40CFR part 503

Commenter: Hughes, Kristen, representing Chesapeake Bay Foundation

In section 9VAC 25-31-510 it looks like Class A biosolids are exempt from management requirements (including setbacks to surface waters, restrictions on application to frozen and flooded ground, etc.). Is this correct? Would the NMP requirement also be waived for Class A biosolids application under the VPDES permitting program?

DEQ Response to Comment: The EPA 503 Rule exempts EQ biosolids from the management practices used for class B biosolids. The regulation requires that the application rate information and notice about frozen ground and waterways be provided to the farmers on the labels or brochures that are approved by VDACS. Distribution and marketing of biosolids, when conducted with a product similar to commercial fertilizer and in a manner similar to commercial fertilizers, will not be considered land application and thus will not require an NMP. The proposed VPDES regulation refers to Part IX of the VPA regulation, so the same requirements will apply to both.

9VAC25-31-510 & 550

Commenter: Parker, Diana, representing Citizens

9VAC25-31-510 & 550: Only Class A biosolids should be bagged. "Biosolids sold or given away in a bag or other container for application to the land MUST designate the percentage of biosolids content, the level of biosolids, and this information must remain on future containers substituted for the originals."

DEQ Response to Comment: EQ biosolids are those that meet Class A Pathogen reduction and have metals below the pollutant concentration limits specified in the federal regulation, and adopted in the VPDES and VPA regulations. Only EQ biosolids may be distributed and marketed, which includes bagging and selling. Pelletized biosolids are 100% biosolids. Biosolids may be blended with mulch, but once a biosolids is blended with another

product, the entire product becomes a biosolids and would be sold as such.

9VAC25-31-530 J

Commenter: Parker, Diana, representing Citizens

9VAC25-31-530 J: "When the department is notified prior to the initial application, a legal notice to the public through closest public media MUST be made by the department."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-31-540

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-31-540 proposes a ceiling concentration limit for molybdenum of 40 milligrams/kilogram ("mg/kg") if biosolids are applied on land used for livestock grazing. Although there is no proposed limit for cumulative loading rates or monthly and annual loading rates, each table is footnoted as follows: "The monthly average concentration is currently under study by the USEPA." HRSD opposes any reduction in the ceiling concentration for molybdenum. HRSD requests that the Board delete the 40 mg/kg reference and the references to molybdenum in the cumulative loading rate tables. HRSD notes that the federal ceiling concentration for molybdenum is 75 mg/kg. The state's proposal to reduce the molybdenum ceiling for livestock grazing areas is premature. The Board should wait until EPA concludes its review to make a determination on this issue. HRSD understands that there is currently only one state in the country-Indiana-that has a more stringent molybdenum requirement than the federal standard. There is simply no justification for making Virginia the second. DEQ's proposal to reduce the molybdenum ceiling concentration would harm biosolids land application in the Commonwealth. If this problem is not corrected, any POTW that has higher levels of molybdenum would be forced to either landfill (at greater expense) or to ask its customers to install treatment to reduce molybdenum discharges to the wastewater plant. Given the current economic environment, neither option is acceptable, particularly because this restriction appears to be unjustified. HRSD would suggest as an alternative to the reduced ceiling concentration, requiring land appliers in livestock grazing areas to notify farmers with grazing cattle if the molybdenum content of the biosolids is between 40 and 75 mg/kg. This would allow an individual farmer to make the decision on how to manage his cattle - though unnecessary this would be better than a reduced ceiling.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540 - Table 1

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Table 1 in Section 9VAC25-31-540 includes a limitation on molybdenum concentrations greater than 40 mg/kg on land used for livestock grazing. DEQ should carefully evaluate the comments that will be submitted by stakeholders on this topic. We believe that it should be clear that any limits established in the regulation for molybdenum must be calculated on a rolling average basis (rather than creating a maximum or minimum limit).

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ

has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540 B - Table 1

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete footnote 1 referring to molybdenum concentrations greater than 40 mg/kg from 9VAC25-31-540 B - Table 1.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540 B - Table 2

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (2) related to EPA study from 9VAC25-31-540 B - Table 2.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540 B - Table 3

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (1) related to EPA study from 9VAC25-31-540 B - Table 3.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540 B - Table 4

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (2) related to EPA study from 9VAC25-31-540 B - Table 4.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-540.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-540 B - Tables - We recommend the regulations allow for changes in updates from the EPA over time. Anticipating the risk assessment changes of the EPA implies that all changes from the EPA will be included in the regulations. To do so would cause significant time delays between the two regulatory programs. For this reason we recommend the Molybdenum restriction be deleted until such time as the EPA finalizes their risk assessment. Further we recommend that any concentration limit be calculated on a rolling average.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-31-543 -

Commenter: Trumbo, Susan, representing Recyc Systems

"Table 1 Chart - Nitrate nitrogen required" This appears to be a carryover from previous regulations. Soil nitrate nitrogen is not applicable to biosolids application. Recommendation: Delete this requirement for soil testing.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this correction has been made.

9VAC25-31-545

Commenter: Lohr, Matthew J., representing VA Department of Agriculture and Consumer Services (VDACS)

The reference to the Virginia Department of Agriculture and Consumer Services should be struck from the proposed 9VAC25-31-545(A) as VDACS does not make recommendations regarding the growth stages at which plant tissue analysis should be conducted.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, these changes have been made.

9VAC25-31-547

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

In a number of areas, the terminology used is not clear. For example, the groundwater monitoring provisions found at 9VAC25-31-547 refer to "land treatment sites," but it is not clear what this means. Is land treatment site the same as a land application site?

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however no changes have been made. "Conventional land treatment" is described in the SCAT Regulations as treatment utilizing "a secondary process for pretreatment of sewage followed by irrigation, overland flow, or infiltration-percolation (or combination thereof) methods for applying treated effluent to an approved site".

9VAC25-31-547.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-547 A - "A. Monitoring wells may be required by the department for land treatment sites, sludge lagoons..." - The use of the term "land treatment sites" is unclear. Please clarify.

DEQ Response to Comment: DEQ acknowledges the review of the commenter,

however no changes have been made. "Conventional land treatment" is described in the SCAT Regulations as treatment utilizing "a secondary process for pretreatment of sewage followed by irrigation, overland flow, or infiltration-percolation (or combination thereof) methods for applying treated effluent to an approved site".

9VAC25-31-550

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-31-550 C - "C. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that..." - We recommend "frozen ground" be defined as, "ground frozen to a depth of at least 2 inches for a period of 72 consecutive hours".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No changes have been made.

9VAC25-31-550 F 3 - "The annual whole sludge application rate for the biosolids that does not cause any of the annual pollutant loading rates in Table 4 of 9VAC25-31-540 to be exceeded." - At the beginning of this item the following words need to be added: "If the biosolids exceed the Pollutant Concentrations in 9VAC25-32-356 Table 3". This is because the annual pollutant loading rates in Table 4 of 9VAC25-32-356 only apply if the biosolids exceed the Table 3 metal concentrations. The applicable requirements are spelled out in 9VAC25-32-356 A 4 a & b.

DEQ Response to Comment: This language is from 40CFR part 503

9VAC25-31-550 F 3

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-31-550 F 3 should include a sentence that reads. "If the biosolids exceed the Pollutant Concentrations in 9VAC25-32-356 Table 3," then the requirements will apply. The annual pollutant loading rates in Table 4 of 9VAC25-32-356 only apply if the biosolids exceed the Table 3 metal concentrations. The applicable requirements are spelled out in 9VAC25-32-356 A 4.

DEQ Response to Comment: This language is from 40CFR part 503

9VAC25-31-720.B 9 and 10

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

The term "sewage sludge" should be replaced with "biosolids".

DEQ Response to Comment: The term "sewage sludge" is appropriate in this usage. In order to be a biosolids, the sewage sludge must be treated to meet at least Class B pathogen reduction standards and meet Vector Attraction Reduction (VAR). If using option 9 or 10 for VAR, biosolids status is not achieved until the sewage sludge has been injected or incorporated.

9VAC25-32-10

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

VPA definitions: The definition of "vector attraction" should include the term "biosolids" in order to be the same as the definition in the VPDES regulations: "the characteristic of biosolids or sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable

of transporting infectious agents."

DEQ Response to Comment: This correction has been made.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

In the definitions section (9VAC25-32-10), the definition of "surface disposal site" references a "sludge unit", but it is not clear how a sludge unit is defined.

DEQ Response to Comment: "Sewage sludge unit" means land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include surface waters.

The definitions (9VAC25-32-10) are comprehensive and capture many of the needed changes. There are a few definitions that could be tweaked. For example, the definition of "land application" needs to have the last sentence changed to add, "such as landfills and the use of biosolids for mined land reclamation under VDMME permits, is not to be considered land application." Finally, the definition of "land application" includes two exemptions (for disposal in landfills and use in agricultural research). A third exemption should be added for use of biosolids at mine reclamation sites. Such uses do not have any agronomic aspect to them and thus should not be considered land application.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No changes have been made.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-10. Definitions. "Local monitor" - Defining local monitors as "employed by a local government" is too restrictive and may preclude some localities from being able to monitor biosolids applications within their jurisdictions. Regulations should be revised to define a local monitor as "designated by" or "engaged by" a local government.

DEQ Response to Comment: The Locality is required to pay the local monitor and certify the reimbursement request for the local monitor activities. Therefore the local monitor must be "employed" by the locality. DEQ currently reimburses a local monitor that works for multiple counties, being a full time employee of none of the counties. No change has been made.

9VAC25-32-10. Definitions. Biosolids - Regulations should not change terminology from sewage sludge to biosolids. To support transparency and full disclosure to the public, the regulations should call these materials "treated sewage sludge" or "sewage sludge biosolids".

DEQ Response to Comment: Biosolids is the nationally accepted term to distinguish between any sewage sludge and sewage sludge that been treated to specific pathogen reduction and Vector Attraction Reduction standards and contains regulated metals below the limits established by EPA and adopted in the VPA and VPDES regulation.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32.10. Definitions - Land application definition - The last sentence needs to be changed to read: "such as landfills and the use of biosolids for mined land reclamation under VDMME permits, is not to be considered land application." (adding mined land in the definition)

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No changes have been made.

9VAC25-32-10. Definitions - "Odor Sensitive receptor" - The definition of "odor sensitive receptor is good as written.

DEQ Response to Comment: DEQ acknowledges the review of the commenter.

9VAC25-32-10. Definitions - "surface disposal site" - "Surface disposal site means an area of land that contains one or more active sewage sludge units." - Please clarify what a "sludge unit" is.

DEQ Response to Comment: "Sewage sludge unit" means land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include surface waters.

Commenter: Trumbo, Susan, representing Recyc Systems

"Other container means either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less." Comment "metric ton" is a measure of weight not volume. For a description of a container a measure of volume in cubic yards would be more appropriate. Recommendation: Substitute 3 cubic yards for one metric ton.

DEQ Response to Comment: This is the definition from the 503, no change will be made.

"Store sewage sludge or storage of sewage sludge means the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment. Comment: This definition needs clarification. What if the sludge is stored on concrete and not "on land"?

DEQ Response to Comment: This is language from 40CFR Part 503. However, DEQ regulations go beyond the 503 by not allowing any "storage" of biosolids on the ground; all on-site and routine storage must take place on an engineered surface. Please see the response to comments regarding staging and storage for more detail.

"Unstabilized solids means organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process." Comment: This definition needs clarification. What if the solids have been treated but not sufficiently to meet the standards to be defined as biosolids? What if the treatment process is another process not aerobic or anaerobic?

DEQ Response to Comment: This is a 503 definition and used very specifically in the requirements for vector attraction reduction

Please use English tons consistently throughout the section. Recommendation: Substitute English tons for metric tons throughout the regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however, the regulations governing biosolids refer to other regulations such as EPA 40CFR Part 136, which used metric tons for reporting purposes, and DCRs 4 VAC 5-15, which uses English tons to determine application rates. Therefore, no changes have been made. Appropriate conversions can be made at the time of reporting.

9VAC25-32-100-6

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

The draft regulations do not address DEQ's failure to ensure that Code requirements are met when permits are issued, or that the need for additional requirements does not become known until after a permit is issued. To address this serious deficiency 9VAC25-32-100-6 must be amended to provide: "Where, because of site-specific conditions special requirements are necessary to protect the environment or the health, safety or welfare of persons residing in the vicinity of a proposed land application site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation routes, slope, material source, methods of handling and application, and time of day restrictions exceeding those required by this regulation. Where the board fails to impose sufficient requirements to provide such protection, no permit may be issued that includes sites that require additional requirements. If the department subsequently fails to incorporate additional required conditions not known at the time the Permit was submitted to the board, no land applications are permitted on sites where such special conditions are needed to ensure that health and the environment are protected."

DEQ Response to Comment: DEQ consults with VDH in order to ensure that public health is protected when biosolids are land applied. VDH has recommended that extended setbacks be included for land application sites near persons with certain medical conditions, and as much as possible, DEQ strives to identify these persons at the time of permitting so that specific setbacks can be established before the permit is issued. DEQ acknowledges that in some cases, these persons or conditions may not be identified until after the permit is issued. In order to meet the statutory requirement of including permit conditions that address public health at the time of permitting, a special condition specifying the procedure through which extended setbacks may be requested will be included in every permit at the time of issuance.

9VAC25-32-140

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-140 B and C - VPA Permit application - Permit Modifications, a public hearing and a public comment period should be required for any additional acreage proposed to be added to a permit. Allowing an increase of up to 50% in acreage covered by a permit without any public notice or review is excessive and precludes any review necessary to protect the environment.

DEQ Response to Comment: DEQ acknowledge the review of the commenter. However, The regulatory language is based on §§ 62.1-44.19:3.C.10 and 62.1-44.19:3.4, which stipulate the public notice and hearing procedures for the addition of land. No changes have been made

9VAC25-32-140 D 2 - A minimum of 15 days should be allowed for public comment after any public hearing on a permit. The Department should not be allowed to shorten the period.

DEQ Response to Comment: The language has been corrected to say Written comments shall be accepted by the board for at least 15 days after any public hearing on the permit, unless

the board votes to shorten the period.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-140 B 2 - "B. VPA Permit Application...2. Whenever the department receives an application for a new permit for land application of biosolids or land disposal of treated sewage, stabilized sewage sludge or stabilized septage, or an application to reissue with the addition of sites increasing acreage by 50% or more of that authorized in the initial permit, the department shall..." - We recommend deleting the word "initial" from this line and add "existing". Any county with a low number of acres would experience several public meetings annually.

DEQ Response to Comment: This requirement is based on § 62.1-44.19:3.C.10: ...to increase the acreage authorized by the initial permit by 50 percent or more...

9VAC25-32-140 B 3 - "3. Following the submission of an application for a new permit for land application of biosolids or land disposal of treated sewage...DEQ shall notify or cause to be notified persons residing on property bordering the site..." - DEQ shall notify adjacent landowners. We recommend that the Department have 60 days to notify landowners.

DEQ Response to Comment: DEQ acknowledges the concern of the commenter regarding the need to not delay notification to adjacent residents. This issue is addressed in guidance and the permit manual in order to meet a specific timeline for permit processing activities.

9VAC25-32-140 C 2 - "2. An application for any permit amendment to increase the acreage authorized by the initial permit by 50% or more..." - We recommend deleting the word "initial" and add "existing". Any county with a low number of acres would experience several public meetings annually.

DEQ Response to Comment: DEQ acknowledge the review of the commenter. However, § 62.1-44.19:3.C.10 of the Code of Virginia states: to increase the acreage authorized by the initial permit by 50 percent or more. No changes have been made

9VAC25-32-140 B 2

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The proposed regulations provide that a public meeting is needed for a modification that is greater than 50% of what is "authorized in the initial permit" (9VAC25-32-140 B 2) The language in the regulation should be consistent with VA Code § 62.1-44.19:3(C)(10). Also there should be a time frame in which DEQ must notify adjacent landowners to ensure that does not hold up the permitting timeline.

DEQ Response to Comment: This requirement is based on § 62.1-44.19:3.C.10: ...to increase the acreage authorized by the initial permit by 50 percent or more...

9VAC25-32-300

Commenter: Trumbo, Susan, representing Recyc Systems

"B. All owners holding active biosolids use permits as of January 1, 2008, shall submit an application for a Virginia Pollution Abatement Permit in accordance with this regulation at least 180 days before the expiration date of permits issued prior to January 1, 2008, or by June 30, 2012, whichever comes first...D. Notwithstanding the foregoing, all VDH-BUR permits shall

terminate no later than December 31, 2012, if an administratively complete VPA application for the activity authorized by the VDH-BUR permit has not been submitted to the department." Comment: Concern that there will be insufficient time between the implementation date and December 31, 2012 for the permittees to respond. Recommendation: Suggest the June 30, 2012 date and December 31, 2012 date be replaced with "six months after implementation of the regulations".

DEQ Response to Comment: The VDH-BUR permits were issued for a 5 year term. The last permit issued by VDH will expire in December 2012. Many other permits were administratively continued, providing the permittees much greater than 5 years to prepare an application for a permit.

9VAC25-32-300 B and D

Commenter: Powell, Mary, representing Nutri-Blend

This regulation requires that all VDH biosolids permits be submitted to DEQ by 06/30/12 and transferred to DEQ permits by 12/31/2012. We request at least a one year extension on this deadline. There have been significant delays in the transfer of the program between the two agencies. There were several years where no permits were issued because the DEQ was just starting up the program. The work involved in transferring these permits is extensive on the part of the contractor and it would not be right to leave farmers who have been in the program for many years without a way to get biosolids because we could not meet the deadline.

DEQ Response to Comment: The VDH-BUR permits were issued for a 5 year term. The last permit issued by VDH will expire in December 2012. Many other permits were administratively continued, providing the permittees much greater than 5 years to prepare an application for a permit.

9VAC25-32-300 D

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-300 D sets a date of December 31, 2012 for all permits to expire that have not been applied for and determined to be administratively complete. This date may need to be changed depending on when the regulation is finished. The regulations should recognize that DEQ must send a notice to the applicant as to whether or not the application is complete.

DEQ Response to Comment: The VDH-BUR permits were issued for a 5 year term. The last permit issued by VDH will expire in December 2012. Many other permits were administratively continued, providing the permittees much greater than 5 years to prepare an application for a permit.

9VAC25-32-300. Transition.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-300 D - "Notwithstanding the foregoing, all VDH-BUR permits shall terminate no later than December 31, 2012..." - We recommend DEQ consider a deadline adjustment to allow more time for administratively complete permit applications needed to replace old BUR permits.

DEQ Response to Comment: The VDH-BUR permits were issued for a 5 year term. The last permit issued by VDH will expire in December 2012. Many other permits were administratively continued, providing the permittees much greater than 5 years to prepare an application for a permit.

9VAC25-32-307 A

Commenter: Razik, Al, representing Maryland Environmental Services

This section refers to the Solid Waste Management Regulations at 9VAC20-80-10 et seq. MES believes that these regulations were repealed in March 2011 and replaced with 9VAC20-81-10 et seq.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This correction has been made

9VAC25-32-313

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Exceptional quality (EQ) biosolids should be encouraged. One means of providing an incentive is to exempt EQ biosolids from the general requirements. The following language could be added to Section 25-32-313: "These general requirements do not apply when the biosolids meet ceiling concentrations in 9VAC25-31-540 B 1, the pollutant concentrations in 9VAC25-31-540 B 3, the Class A pathogen requirements in 9VAC25-31-710 A, and one of the vector attraction reduction requirements in 9VAC25-31-720 B 1 through B 8." Requirements for distribution and marketing of EQ biosolids are covered in 9VAC25-32-570.

DEQ Response to Comment: This is based on the Federal language in the 503. Virginia regulation cannot be less stringent than the federal regulation and exceptional quality biosolids are exempt from the regulations regarding cumulative pollutant loading rates (CPLR), because the concentrations of metals must be below the levels that that put a biosolids in the CPLR category.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-313 - Biosolids that meet EQ standards should be exempted from these General Requirements. Specifically in 9VAC25-32-313 G; H; I; & J. We suggest the following language be added: "These general requirements for not apply when the biosolids meet ceiling concentrations in 9VAC25-31-540 B 1, the pollutant concentrations in 9VAC25-31-540 B 3, the Class A pathogen requirements in 9VAC25-31-710 A, and one of the vector attraction reduction requirements in 9VAC25-31-720 B 1 through B 8." Requirements for Distribution and Marketing of EQ biosolids are covered in 9VAC25-32-570. Also, should label and NANI be defined? or can requirements be met with a label?

DEQ Response to Comment: This is based on the Federal language in the 503. Virginia regulations cannot be less stringent than the federal regulation and exceptional quality biosolids are exempt from the regulations regarding cumulative pollutant loading rates (CPLR), because the concentrations of metals must be below the levels that that put a biosolids in the CPLR category.

Commenter: Trumbo, Susan, representing Recyc Systems

"B. Nothing in this part precludes another state agency with responsibility for regulating biosolids or sewage sludge or any political subdivision of Virginia or an interstate agency from imposing requirements for the use of biosolids or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use of biosolids or disposal of sewage sludge." Comment: Object to the general delegation of authority to other agencies to regulate biosolids. Recommendation: Recommend using the following language:

"Nothing in this part shall preclude any state agency or political subdivision from exercising its authority to regulate biosolids to the fullest extent of such authority"

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to say: Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.

"E. The person who prepares bulk biosolids that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies that bulk biosolids written notification of the concentration of total nitrogen (as N on a dry weight basis) in the bulk biosolids." Comment: Concern that the point of sampling by the "person who prepared bulk biosolids" will not be representative of the material that is land applied. "Person who prepares bulk biosolids" is sampling to determine stabilization and vector control. Nitrogen measurement needed by the "person who applies the bulk biosolids" is for determination of the agronomic application rates. Also, there seems to be some overlap in the requirements with section 9VAC25-32-450. Recommend a consolidation into one section to avoid confusion. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: This is federal language. By accepting biosolids the land applier is responsible for ensuring that the product they accept has been treated to meet biosolids standards, and the land applier is responsible for providing that information to the land owner.

9VAC25-32-315 A

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

9VAC25-32-315 A must be amended to provide: "On a case-by-case basis the board may impose requirements for the use of biosolids or the disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effect of a pollutant in the biosolids or sewage sludge. If extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s). Where the board fails to impose sufficient requirements to provide such protection, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-315 A must be modified to provide: "On a case-by-case basis, the board may impose requirements for the use of biosolids sewage sludge or the disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effect of a pollutant in the biosolids or sewage sludge. Where the board fails to impose sufficient additional requirements, no permit may be issued that includes sites that require additional requirements. If the department subsequently fails to incorporate the required conditions not known at the time the Permit was submitted to the board, no land applications are permitted on sites where more stringent requirements are necessary to ensure that health and the environment are protected."

DEQ Response to Comment: DEQ acknowledges the concern of the commenter that

permits be issued according to statutory requirements. VDH has recommended that extended setbacks be included for land application sites near persons with certain medical conditions, and as much as possible, DEQ strives to identify these persons at the time of permitting so that specific setbacks can be established before the permit is issued. DEQ acknowledges that in some cases, these persons or conditions may not be identified until after the permit is issued. In order to meet the statutory requirement of including permit conditions that address public health at the time of permitting, a special condition specifying the procedure through which extended setbacks may be requested will be included in every permit at the time of issuance.

9VAC25-32-315 A must be amended to provide: "On a case-by-case basis the board may impose requirements for the use of biosolids or the disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect human health and the environment from any adverse effect of a pollutant in the biosolids or sewage sludge. If extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s). Where the board fails to impose sufficient requirements to provide such protection, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-315 B

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-315. B allows any "state agency with the responsibility for regulating biosolids" may impose more stringent requirements. This requirement is troubling because it does not include a provisions requiring the agency to impose more stringent requirements due to public health or environmental impact. More stringent standards can be imposed without rationale. It is recommended that this section be deleted or amended to state that more stringent requirements must be scientifically defensible.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to say: Nothing in this part precludes the authority of another state agency, political subdivision of Virginia or an interstate agency with respect to the use of biosolids or disposal of sewage sludge.

9VAC25-32-315 C

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-315 C - Additional and more stringent requirements. This section of the regulations should prohibit land application of biosolids on areas designated as floodplains, on Karst landscapes characterized by limestone outcroppings, sinkholes, solution channels, and caves and on slopes greater than 7%.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Setbacks have been increased to address Karst. Please see the response to comments regarding Environmental Concerns.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

9VAC25-32-315 C must be amended to provide: "For biosolids sewage sludge land application where, because of site specific conditions, including soil type, identified during the permit application review process, the department determines that special requirements are necessary to protect the environment or the health, safety or welfare of persons residing in the vicinity of a proposed land applications site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation...restrictions exceeding those required by this regulation...If the extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

9VAC25-32-315 C must be amended to provide: "For biosolids sewage sludge land application where, because of site specific conditions, including soil type, identified during the permit application review process, the department determines that special requirements are necessary to protect the environment or the health, safety or welfare of persons residing in the vicinity of a proposed land applications site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation...restrictions exceeding those required by this regulation...If the extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-315 C must be modified to provide: For biosolids sewage sludge land application where, because of site specific conditions, including soil type, identified during the permit application review process, the department determines that special requirements are necessary to protect the environment or the health, safety or welfare of persons residing in the vicinity of a proposed land applications site, the department may incorporate in the permit at the time it is issued reasonable special conditions regarding buffering, transportation...restrictions exceeded those required by this regulation...If sufficient additional conditions are not imposed that ensure the protection of health and the environment on any site, no sewage sludge may be land-applied on such site(s). Where the board fails to impose sufficient requirements to provide such protection, by Code no permits may be issued."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-317

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-317 B - "B. Selection of a use or a disposal practice. This part does not require the selection of a biosolids use or sewage sludge disposal practice. The determination of the manner in which biosolids is used or sewage sludge is disposed is a local determination."

- This is a significant change to preemption of local authority. We recommend that "local determination" of how biosolids are disposed be deleted.

DEQ Response to Comment: The section has been reworded to clarify.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

In some instances, it appears that language has been taken from the federal regulations and inserted into Virginia's proposed regulation, sometimes out of context. For example, the language in 9VAC25-32-317 B has been lifted from the Federal Regulations and has caused untold confusion over the years. This section should be revised to read: "The determination of the manner in which biosolids is used or sewage sludge is disposed is to be made by the locality generating the biosolids."

DEQ Response to Comment: The language has been revised to clarify that the municipality determines how the sludge produced within that municipality shall be managed.

9VAC25-32-320

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-320 appears to give a locality the power to hold up land application activities if there is a dispute about a violation they allege is occurring until such time as the dispute is resolved by the director. No time frame is provided in which DEQ must investigate the dispute and render a decision.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language is from § 62.1-44.19:3.2.B

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-320 A - "A. In the event of a dispute concerning the existence of a violation between a permittee and a locality that has adopted a local ordinance for testing and monitoring of the land application of biosolids the activity alleged to be in violation shall be halted pending a determination by the director." - It appears a locality can hold up land application activities if there is a dispute about a violation they allege is occurring until such a time as the dispute is resolved by the director. This is of concern especially since there is no time frame by which DEQ must investigate the dispute and render a decision. This section should specify a field instead of a site so not to hold up all spreading activity on the farm and a time frame for resolution by DEQ.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language is from § 62.1-44.19:3.2.B

Commenter: Trumbo, Susan, representing Recyc Systems

"A. In the event of a dispute concerning the existence of a violation between a permittee and a locality that has adopted a local ordinance for testing and monitoring of the land application of sewage sludge and a permittee concerning the existence of a violation biosolids..." Comment: Suggest that any locality be allowed to enforce the regulations rather than only those that have adopted a local ordinance. Recommendation: Delete the requirement for the locality to have a local monitoring ordinance.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language is from § 62.1-44.19:3.2.B

9VAC25-32-356

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-33-356 proposes a ceiling concentration limit for molybdenum of 40 milligrams/kilogram ("mg/kg") if biosolids are applied on land used for livestock grazing. Although there is no proposed limit for cumulative loading rates or monthly and annual loading rates, each table is footnoted as follows: "The monthly average concentration is currently under study by the USEPA." HRSD opposes any reduction in the ceiling concentration for molybdenum. HRSD requests that the Board delete the 40 mg/kg reference and the references to molybdenum in the cumulative loading rate tables. HRSD notes that the federal ceiling concentration for molybdenum is 75 mg/kg. The state's proposal to reduce the molybdenum ceiling for livestock grazing areas is premature. The Board should wait until EPA concludes its review to make a determination on this issue. HRSD understands that there is currently only one state in the country-Indiana-that has a more stringent molybdenum requirement than the federal standard. There is simply no justification for making Virginia the second. DEQ's proposal to reduce the molybdenum ceiling concentration would harm biosolids land application in the Commonwealth. If this problem is not corrected, any POTW that has higher levels of molybdenum would be forced to either landfill (at greater expense) or to ask its customers to install treatment to reduce molybdenum discharges to the wastewater plant. Given the current economic environment, neither option is acceptable, particularly because this restriction appears to be unjustified. HRSD would suggest as an alternative to the reduced ceiling concentration, requiring land appliers in livestock grazing areas to notify farmers with grazing cattle if the molybdenum content of the biosolids is between 40 and 75 mg/kg. This would allow an individual farmer to make the decision on how to manage his cattle - though unnecessary this would be better than a reduced ceiling.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-356 - Biosolids should be monitored for an expanded list of pollutants that are known to be present in sewage sludge. At a minimum, 9VAC25-32-356 should be revised to require biosolids be analyzed for aluminum, barium, beryllium, boron, calcium, manganese and silver (identified by EPA as metals of concern in sewage sludge). Because sludge can come from municipal sources and may affect drinking water, analyses of class B biosolids should also include the organic chemicals listed in Table 1 of 9VAC25-32-570.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding Exceptional Quality Biosolids

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-356 B - Tables - We recommend the regulations allow for changes in updates from the EPA over time. Anticipating the risk assessment changes of the EPA implies that all changes from the EPA will be included in the regulations. To do so would cause significant time delays between the two regulatory programs. For this reason we recommend

the Molybdenum restriction be deleted until such time as the EPA finalizes their risk assessment. Further we recommend that any concentration limit be calculated on a rolling average.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-356 - Table 1

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Table 1 in Section 9VAC25-32-356 includes a limitation on molybdenum concentrations greater than 40 mg/kg on land used for livestock grazing. DEQ should carefully evaluate the comments that will be submitted by stakeholders on this topic. We believe that it should be clear that any limits established in the regulation for molybdenum must be calculated on a rolling average basis (rather than creating a maximum or minimum limit).

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-356 B - Table 1

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (1) related to EPA study from 9VAC25-32-356 B - Table 1.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-356 B - Table 2

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (2) related to EPA study from 9VAC25-32-356 B - Table 2.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-356 B - Table 3

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (2) related to EPA study from 9VAC25-32-356 B - Table 3.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ

has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-356 B - Table 4

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete Molybdenum from the pollutant list and delete footnote (2) related to EPA study from 9VAC25-32-356 B - Table 4.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ has delayed action pending EPA adoption of a molybdenum standard, and the language has been revised and moved to the footnotes for Tables regarding Cumulative pollutant loading rates and pollutant concentrations.

9VAC25-32-359 A 3 b (5)

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-359 A 3 b (5) should specify whether the amount of biosolids should be stated in dry or wet tons.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This correction has been made.

9VAC25-32-360

Commenter: Trumbo, Susan, representing Recyc Systems

"A. An activity report shall be submitted (electronically or postmarked) to the department by the 15th day of the month unless another date is specified in the permit in accordance..."

Comment: Object to the allowance for the reporting date in the permit to govern. This allowance would cause for inconsistency in reporting dates. Recommendation: Delete "unless another date is specified in the permit in accordance with..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this is standard language, which is also used in the VPDES regulation that allows another reporting date to be established on a case by case basis if necessary. The standard Permit template will include the reporting date of the 15th. This gives DEQ flexibility to allow another reporting date where required.

"C. Biosolids application rates shall be calculated using the results from sampling and analysis completed during the most recent 12 months of monitoring. For proposed treatment works, rates may be initially based on the biosolids characteristic produced by similar generating facilities." Comment: This requirement seems out of place in reporting. Recommendation: Recommend it be moved to 9VAC25-32-560 Biosolids Utilization Methods.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this is standard language, which is also used in the VPDES regulation that allows another reporting date to be established on a case by case basis if necessary. The standard Permit template will include the reporting date of the 15th. This gives DEQ flexibility to allow another reporting date where required.

9VAC25-32-400

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-400: This section should be corrected to read "Microbial testing may be necessary to document the Class A sludge treatment given the reference to the log mean of 9 or more samples while the standard for Class B sludge treatment is the geometric mean of 7 samples."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The correction has been made. Microbiological testing is always required for Class A biosolids.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-400 A - "The department may require...Such requirements may occur in situations...nuisance conditions are identified as an existing problem or potential problem as a result of biosolids use operations..." - It is not practical to regulate potential problems. This leads to subjective rule within the Department. We recommend deleting "potential problem".

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however no changes have been made. The term "potential problems" is consistent with the requirement for the permittee to submit plans for preventing a problem from reoccurring in the future.

9VAC25-32-400 D - "D. The department may require biosolids to be tested for certain toxic organix compounds prior to agricultural use..." - What criteria are required for additional testing? The Department should establish reasons for requiring any additional testing.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding Exceptional Quality Biosolids

9VAC25-32-400 E - "E. Additional parameters may be required for screening purposes..." - What triggers these requirements? The Department should establish reasons for requiring any additional testing.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding Exceptional Quality Biosolids

9VAC25-32-400. Additional monitoring.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-400 F - "F. Microbiological testing may be necessary to document the sludge treatment classification (9VAC25-32-675). Microbiological standards shall be verified by the log mean of the analytical results from testing of nine or more samples..." We recommend this be revised to read: "Microbiological testing may be necessary to document the Class A sludge treatment..." Our assumption is the Department is referring to fecal sample analysis and not all microbiological testing. The Department should clarify and reduce 9 to 7.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The correction has been made. Microbiological testing is always required for Class A biosolids.

9VAC25-32-400.F

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-400.F requires nine samples to determine a geometric mean for

microbiological sample analyses. 40 CFR503 and 9VAC25-31-710-B.3 require seven samples be used for determining the geometric mean. It is recommended that the language be changed to "seven samples" in order to have consistency with the VPDES regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The correction has been made.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-400: This section should be corrected to read "Microbial testing may be necessary to document the Class A sludge treatment given the reference to the log mean of 9 or more samples while the standard for Class B sludge treatment is the geometric mean of 7 samples."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The correction has been made. Microbiological testing is always required for Class A biosolids.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-400 F - "F. Microbiological testing may be necessary to document the sludge treatment classification (9VAC25-32-675). Microbiological standards shall be verified by the log mean of the analytical results from testing of nine or more samples..." We recommend this be revised to read: "Microbiological testing may be necessary to document the Class A sludge treatment..." Our assumption is the Department is referring to fecal sample analysis and not all microbiological testing. The Department should clarify and reduce 9 to 7.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The correction has been made. Microbiological testing is always required for Class A biosolids.

9VAC25-32-410

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

Replace the term "operations management plan" with the term "biosolids operation plan" for consistence and clarification of the requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the name has been changed to Biosolids Management Plan.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-410 A 2 - "2. Nutrient management plan for each site, in accordance with 9VAC25-32-560; and..." - Requires that the NMP is included in the O&M booklet (again making the plan enforceable). This needs to be deleted and not included in the O&M Manual. Needs to be on site, not in manual.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The biosolids management plan is made up of 3 parts, the information provided in the permit application, the O&M manual, and the nutrient management plans. Each component of the biosolids management plan is enforceable. Section 9VAC25-31-485.G. of the VPDES regulation and section 9VAC25-32-410 of the VPA regulation specify the components of the biosolids management plan and required time of submission for each.

9VAC25-32-410

Commenter: Trumbo, Susan, representing Recyc Systems

"A. The permit holder shall maintain an operations management plan that shall consist of

three components:..." Comment: Conflicts or redundant with 9VAC25-32-60 and 9VAC25-32-500. Recommendation: Combine the requirements of this section into section 9VAC25-32-60. Delete this section.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. These sections have been rewritten language in 9VAC25-32-500 has been rewritten and consolidated into 9VAC25-32-410 and 9VAC25-31-485-G.

9VAC25-32-410 A 2

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-410 A 2 describes the operations management plan and provides that it include both the nutrient management plan and the "operations and maintenance manual". While DEQ can require that a NMP is developed and that the permittee must abide by the NMP, the regulation should make it clear that only DCR can approve the content of the NMP. Additionally, the use of the terms "operations management plan" and "operations and maintenance manual" and "operations and maintenance booklet" is confusing. The terms are often interchanged, and it is unclear whether they are used appropriately throughout the regulation. To eliminate some confusion, it may be useful to change the term "operations management plan" to "land application plan".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the name has been changed to Biosolids Management Plan.

9VAC25-32-420 -

Commenter: Trumbo, Susan, representing Recyc Systems

"B. The need for spare parts should be determined from operational experience, and evaluation...C. Sufficient spare parts determined as necessary..." Comment: This appears to be a carryover from previous regulations and should be removed. Additionally, we question the Department's ability to enforce this requirement as the needs are subjective and dependent on the age and quality of the equipment. Recommendation: Delete this requirement in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; this is standard requirement for an O&M Manual.

9VAC25-32-420 B

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

VAMWA suggests that 9VAC25-32-420 B and C be moved to 9VAC25-32-410, which lists the requirements for an O&M Manual. This would place all of the required elements of the O&M Manual in one section of the regulation.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however, no changes have been made. Contents of the O&M manual may include descriptions of various means to meet permit requirements listed throughout the regulation.

9VAC25-32-420 C

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-420 C (operability) appears to be a carryover provision from the VPDES regulations. It does not apply in the VPA context. This section should be deleted from the regulation.

DEQ Response to Comment: This would apply to facilities that treat the sewage sludge or biosolids only, such as a compost facility or biosolids generating facility not located at the sewage treatment plant where the sewage sludge was generated.

9VAC25-32-420.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-420 C - "C. Sufficient spare parts determined as necessary to ensure continuous operability of ..." - This is out of context and may be clipped from the VPDES sections. We recommend that it be deleted.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The spare parts would relate the spreaders and loaders in the field, so that in the event of a break down, land application would continue and be completed in a timely manner.

9VAC25-32-420.B & C

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

Move 9VAC25-32-420 B & C to 9VAC25-32-410 which lists the requirements for an operations and maintenance (O & M) Manual. This would place all of the required elements of the O & M Manual in one section of the regulation.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, no changes were made

9VAC25-32-450

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-450 F - "F. Biosolids samples shall be preserved and analyzed in accordance with methods listed in the Code of Federal Regulations at 40 CFR Part 136 (2007) and methods identified in 9VAC25-31-490..." - The analytical methods in 40 CFR Part 503 should also be included in this paragraph. This would also make the regulation consistent with the Part 503 analytical methods listed in 9VAC25-31-490 B.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. 9VAC25-31-490 includes the test methods identified in 40 CFR Part 503.

Commenter: Trumbo, Susan, representing Recyc Systems

"A. Representative samples of biosolids that is applied to the land or placed on a surface disposal site shall be collected and analyses...1. Raw sewage or sludge samples are to be collected...2. Final treated samples are to be taken at a point...3. Composite samples shall be collected..." Comment: This appears to be a carryover from previous regulations. Requirements need to be refined for use by either VPDES or VPA permits. There is also some overlap with section 9VAC25-32-313 - General Requirements. Recommendation: Recommend sampling and nutrient information be consolidated into one section to avoid confusion.

DEQ Response to Comment: The VPA permit may cover wastewater treatment plants that do not discharge to state waters, therefore sewage sludge sampling would be required at all stages of treatment.

"C. Biosolids storage facilities. Equal volumes of biosolids shall be withdrawn from random locations across the width and throughout the length of the storage facility at the surface, mid-depth and near the bottom of the lagoon at each grab sample location." Comment: This

appears to be a carryover from previous regulations and needs refinement to better represent current operations. For example, not all storage facilities are lagoons. One would expect the sampling locations to apply to all storage facilities and not just lagoons. Sampling instructions do not provide for material to be stored and removed in batches. Sampling of the batch removed would be recommended. Recommendation: Substitute "stored material being removed for land application" for "lagoon".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, however, storage facilities designed as lagoons or basins remain in operation. No changes have been made.

9VAC25-32-450.A

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-450 A provides an overly prescriptive description of the requirements for sampling. It is recommended that paragraphs B., C., D., and E. be deleted as they are inconsistent and provide little value. Since the sampling protocol must be include in the O & M Manual and the manual is submitted to DEQ, it is recommended that only paragraphs A and F of this section be retained.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the Biosolids Management Plan shall include sampling protocols, however those protocols shall at minimum meet the standards in 9VAC25-32-450

9VAC25-32-460

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-460 - This section states, "Soil shall be sampled and analyzed prior to biosolids application...", but does not say when soil samples must be taken. Soil sampling should be required to take place between the last application of fertilizer (in any form, including poultry litter) and the time of application covered by the subject permit. In no case should samples be taken more than one (1) year prior to the permit application. Results from a 3-year old analysis (the current requirement) are likely not to be reflective of actual soil conditions at the time of application. Of other fertilizer or soil amendments are applied within the 3-year period, the older soil sample results would be meaningless.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Soil testing is for NMP development, which the statute says shall be developed by a certified nutrient management planner in accordance with DCR statute. Therefore, DCR standards and criteria apply to NMP development, and DCR allows a sample to be up to 3 years old.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-460 - Table 1 - Soil Test Parameters for Land Application Sites - We do not understand what this table is trying to say or require, please clarify.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This table has been restructured to clarify

9VAC25-32-460 Table 1

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The soil monitoring requirements found in Table 1 of 9VAC25-32-460 do not make

sense. The table is confusing and does not appear to specify any frequency for such sampling.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This table has been restructured to clarify

9VAC25-32-480

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-480 A - "A. Monitoring wells may be required by the board for land treatment sites, sludge lagoons..." - Please clarify "land treatment" and the circumstances that trigger this requirement?

DEQ Response to Comment: DEQ acknowledges the review of the commenter, however no changes have been made. "Conventional land treatment" is described in the SCAT Regulations as treatment utilizing "a secondary process for pretreatment of sewage followed by irrigation, overland flow, or infiltration-percolation (or combination thereof) methods for applying treated effluent to an approved site".

9VAC25-32-490

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

In Water Guidance Memo No. 10-2004 (7/26/10), DEQ points out that 9VAC25-32-490 states: "The Board may impose standards and requirements that are more stringent than those contained in these regulations when required to protect public health or prevent nuisance conditions from developing." In it not clear what happened to Section 490 as there is no Section 490 in the draft regulations. However, it is imperative that the Board reinstate Section 490 and amend is as follows: "The Board may impose standards and requirements that are more stringent than those contained in these regulations when required to protect public health or prevent nuisance conditions from developing. Where the Board fails to impose sufficient additional requirements, no permit may be issued that includes sites that require additional requirements. If the Department subsequently fails to incorporate the required conditions not known at the time the Permit was submitted to the Board, no land applications are permitted on sites where special conditions are needed to ensure that health and the environment are protected."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No amendments were proposed to 490, therefore it is not included in this "project", but it remains in the VPA regulation as it was originally written.

9VAC25-32-50 A

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Regulatory provisions that violate the Code must be eliminated: For example, 9VAC25-32-50A provides "Compliance with a VPA permit constitutes compliance with the VPA permit requirements of the law.". However, this provisions assures that issued Permits comply with the Code of Virginia. Indeed, a number of regulatory provisions preclude compliance with the Code. The waiver language is typical of this fatal deficiency. For example: 9VAC25-32-560-B(3)(g)(3) fn2 provides: "The buffer to occupied dwellings may be reduced or waived upon written consent of the occupant of the dwelling." and 9VAC25-32-560-B(3)(g)(3) fn6 provides: "Property line buffers may be reduced or waived upon written consent of the adjacent property resident or landowner." In order to comply with the requirements of the Code of Virginia, the waiver language must either be eliminated or rewritten to require prior DEQ

approval and certification that health and the environment will continue to be protected under each waiver proposed by the Permit Holder.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-500

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

Subsection 3O gives DEQ the ability to allow unincorporated sewage sludge in the vicinity of odor sensitive individuals as long as sufficient buffers are in place to ensure that they are protected. For unknown reasons, in 9VAC25-32-500 DEQ proposed to define "odor sensitive receptors" as buildings rather than individuals. "Odor sensitive receptor" means, in the context of land application of biosolids, a building or outdoor facility regularly used to host or serve large groups of people, such as schools, dormitories, athletic and other recreational facilities, hospitals and convalescent homes." It is not clear why DEQ would propose such a definition, much less refer to biosolids rather than sewage sludge. The Board must delete the proposed definition.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. VDH established the meaning of the term odor sensitive receptor

9VAC25-32-500 - Biosolids Management

Commenter: Trumbo, Susan, representing Recyc Systems

"B. The biosolids operations management plan developed by the owner...C. A complete biosolids operations management plan shall be submitted..." Comment: This is the third of four sections in the draft regulations to define a Biosolids Management Plan. Recommendation: Combine the requirements of this section into section 9VAC25-32-60. Delete this section.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. These sections have been consolidated and rewritten.

9VAC25-32-515

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-515 A 2 h - "h. if multiple sites are included in the notification, the permit holder shall make a good faith effort to identify the most probable order that land application will commence." - We recommend this line be deleted or change by replacing "shall" with should.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515 B 1 - "B. Posting Signs. 1. At least 5 business days prior to delivery of biosolids for land application on any site permitted under this regulation..." - We recommend replacing 5 business days with 2 business days. Given all the new public notification requirements, we see no added benefit of increasing the notification time from 2 to 5 days.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515 B 1 c - "c. The department may grant a waiver to the requirements in

this section, or require alternative posting options due to extenuating circumstances or to be consistent with local government ordinances and other requirements regulating the use of signs." - We request the signage requirements be consistent for all sites and recommend removal of language that allows areas to adopt more restrictive signage requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

Commenter: Trumbo, Susan, representing Recyc Systems

"3. The permittee shall deliver or cause to be delivered daily notification to the department and the chief executive officer or his designee for the local government where the site is located prior to commencing planned land application activities." Comment: This is an example of agencies trying to regulate good manners. The results are awkward and burdensome. I object to what was a voluntary gesture of good will to facilitate monitoring of field operations being required. The requirement for daily prior notification will be a burden which may disrupt field operations and force the use of storage when fields are unavailable simply because notice was not provided. The requirement does not allow for the permit holder to jump around when needed to facilitate unforeseen factors. To maintain this requirement will cause material to be stored in the field unnecessarily. To ensure this requirement is met and facilitate the needs of field operations to be conducted, the permit holder will be forced to provide a list of all available sites. Recommendation: Replace with "3. The permittee shall make a good faith effort to deliver or cause to be delivered daily notification of planned field operations to the department and the chief executive officer or designee for the local government where the site is located."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

"a. If the site is located adjacent to a public right-of-way, signs shall be posted along each road frontage beside the field to be land applied." Comment: It is possible that large tracts have multiple road frontages some of which may be a distance from the actual field operations. To put signs on these road frontages will cause confusion. Recommendation: Recommend changing to "posting at each/every entrance being used to access each field at the site on the road frontage."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

"b. The name and telephone number of the permit holder and the name or title and telephone number of an individual designated by the permit holder to respond to complaints and inquiries; and..." Comment: This requirement funnels the calls to a specific person. If that person is not available a message is taken. We prefer that calls of this type be handled immediately. If the caller does not ask for an individual it would be handled by whomever is present and capable to answer questions. In contrast the contact information for DEQ does not list an individual. Recommendation: Recommend deleting the requirement to list a name or title.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

"c. A map indicating haul routes to each site where land application is to take place;..."
 Comment: We have found a map showing all the sites with truck routes to be cluttered and difficult to read. Recommendation: Recommend striking the requirement for a map which would allow for written truck routes.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 2

Commenter: Powell, Mary, representing Nutri-Blend

This requires a 14 day notification be sent to the local government where the site is located. Many localities do not want this extensive information and for not have anyone to handle it. As an alternative, we request that the DEQ contact counties with existing biosolids permits and ask if they would like to receive this information. If so, DEQ could add them to a list of contacts that would be distributed to land appliers. This is similar to current practices where the contractors work from a list of county monitors provided by DEQ. Further, we would like to see section c, e, and h removed. The dates of application are very difficult to pinpoint as is the duration of the application. Weather, equipment failure, trucking, changes to crop rotations, and availability of material all make it difficult to give this information accurately. The DEQ is really asking for a guess which isn't useful to anyone. When we give the 14 day notice, we are giving the best information that we have in that we intent on applying to the site in the near future as conditions allow. The requirement for haul route maps would make the notices very large and the haul route could also change significantly due to any number of circumstances. Since we can vary the haul route and are not required to maintain a specific route, this is not useful or accurate information.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-515 A 2 to delete reference to "local government": "2. At least 14 days prior to commencing land application of biosolids at a permitted site, the permit holder shall deliver or cause to be delivered written notification to the department and the chief executive officer or designee for the local government where the site is located. The notice shall include the following:..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 2 a

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-515 A 2 a to read: "a. The name, address and telephone number and contact information of the permit holder, including the name of a representative knowledgeable of the permit;, at least one individual designated by the permit holder to respond to questions and complaints related to the land application, and the wastewater treatment facility, or facilities, from which the biosolids will originate, including the name or title of a representative of the treatment facility that is knowledgeable about the land application operation:"

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 2 b

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-515 A 2 b to read: "b. Identification by tax map number and the DEQ control number for sites on which land application is to take place:"

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 2 c

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-515 A 2 c to read: "c. A map indicating description of proposed haul routes to each site where land application is to take place; and"

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No change was made to the language, but the language was moved to notification of posting signs 5 days prior to application, so that there will be more certainty about which sites will be land applied.

9VAC25-32-515 A 2 d

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-32-515 A 2 d - information moved to revised 9VAC25-32-515 A 2 a.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 2 f & g

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-32-515 A 2 f & g - Information moved to revised 9VAC25-32-515 A 2 a.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

9VAC25-32-515 A 3

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The proposed regulation requires that a permittee provide daily notification to the department and the executive officer of the local government where the site is located prior to commencing planned land application activities (9VAC25-32-515 A 3). This provision should be written in a manner that allows more flexibility. This requirement is overkill given the signage and other notification requirements associated with the permitting process. The language could be amended to make it similar to the requirement relating to multiple sites - that the permittee shall make a good faith effort to provide notification within 24 hours and to identify the sites that will receive biosolids that day.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

The notification requirements include a determination of the most probable order that land application will commence. (9VAC25-32-515 A 3) However this is an impossible requirement because there are so many variables that impact the order. This requirement should be deleted.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding notification.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-515 A 3 to read: "3. The permittee shall deliver or cause to be delivered daily notification to the department by facsimile, electronic mail, or telephone and the chief executive officer or designee for the local government where the site is located prior to on the day of commencing planned land application activities. The notification shall include the approximate date on which land application is to end at the site."

DEQ Response to Comment: The requirement for 14 day notification to the counties was in the VDH BUR regulations. Following DEQ review of the final exempt action to transfer the VDH regulations to the DEQ regulations as well as receipt of inquiries from the counties requesting that this requirement be placed back in the regulation, the requirement was added to the proposed regulation.

9VAC25-32-515 B 1

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

A topic discussed at length during the TAC process was the number of days that the signs must be posted prior to delivery of biosolids for land application (9VAC25-32-515 B 1). Land applicators continue to believe that posting the signs two days prior to land application is sufficient given the other notice provisions that apply throughout the permitting process.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

Commenter: Powell, Mary, representing Nutri-Blend

This requires that a sign be posted 5 business days prior to and post application. As a practical matter, it is very difficult to maintain signs for this length of time. The current regulations require a sign to be posted 48 hours before and after an application. We must frequently replace these signs as they are often damaged or removed. These regulations require more signs to be posted for even longer periods of time. In our experience, the signs will rarely stay in that location for that time period regardless of construction material. Further, in order to compensate for the many variabilities in timing biosolids applications, signs will have to be posted even further in advance. This will defeat the purpose of notification since adjacent land owners will not know exactly when the application will take place. When the sign is placed 48 hours in advance, we are fairly certain that we will be at the farm in the very near future giving adjacent landowners a better idea of when to expect the application.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515 B 1 b

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-515 B 1 b states that the notification signs must be posted along all road frontages. It would make more sense for the provisions to require signs to be posted on the road frontage used as an entrance to the field. If there are multiple entrances that will be used, a sign will be required at each entrance. The language currently included in the proposed regulation imposes a significant burden and expense on the applicators with little benefit. Moreover, placing signs in this manner could be a safety hazard.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

Commenter: Smedley, Scott, representing Virginia Biosolids Council

Section 9VAC25-32-515 B 1 b states that the notification signs must be posted along all road frontages. It would make more sense for the provisions to require signs to be posted on the road frontage used as an entrance to the field.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515 C

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

We support the language of 9VAC25-32-515 C requiring localities receiving complaints to notify the applicator within 24 hours. This will improve communication and result in quicker response to complaints.

DEQ Response to Comment: DEQ acknowledges the support of the commenter

Commenter: Smedley, Scott, representing Virginia Biosolids Council

The VBC supports the language of 9VAC25-32-515 C requiring localities receiving complaints to notify the applicator within 24 hours. Any effort to improve communications associated with the use and recycling of biosolids is good.

DEQ Response to Comment: DEQ acknowledges the support of the commenter

9VAC25-32-515 F 1 c

Commenter: Smedley, Scott, representing Virginia Biosolids Council

9VAC25-32-515 F 1 c - The intent of Subparagraph F 1 c was to ensure that the regulations did not conflict with general sign ordinances in effect in some localities. As written, it could be construed to allow localities to require additional information, larger signs, longer posting times, etc. Instead, the provisions should state that the department may grant a waiver from the requirements where the requirements conflict with local government ordinances and other requirements regulating the use of signs.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515. Notification of land application activity.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-515 A 1 - "A. Written notification. 1. At least 100 days prior to commencing land application of biosolids at a permitted site..." - We recommend the line read that 100 day notice is given prior to commencing land application at a proposed permitted site. This will keep us from waiting an extra 100 days from the time that we receive the permit to be able to use it. Currently we send out the notice when we get the draft so that we have the new VPA number on the notification.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-515.A.2

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires that the local government also be notified 14 days in advance. The State law only requires notification to DEQ which is appropriate. Not all localities have a person dedicated to land application. It is recommended that the requirement for notification to the locality be deleted. Since the local government is contacted during the permit application process, they can request notification as a condition of the permit. This would add value to a notification requirement since the locality would provide a point of contact for the permit holder.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. Please see the response to comment regarding notification

9VAC25-32-530

Commenter: Trumbo, Susan, representing Recyc Systems

"3. New landowner agreements shall be submitted to the department with each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids." Comment: Landowner form is not included in the regulations. Recommendation: Include a landowner form with the minimum information required by the Department in the regulations.

DEQ Response to Comment: This form is included in the permit application form referenced in the regulation.

"A. When an application to permit land application of sludge biosolids is proposed, submitted to the department, the permit applicant shall ensure the continued availability of the land and protection from improper concurrent use during the utilization period." Comment: This requirement cannot be met by the permit applicant given the permit applicant does not possess the land nor do they have control of the land. We question the ability of the Department to enforce this requirement given the lack of the permit holder to have such rights. Recommendation: Recommend deleting this requirement in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This is a general statement regarding the responsibility of the permit holder to ensure biosolids management practices are followed. More specific requirements that the land applier is required to follow are listed later in this section. No changes have been made.

9VAC25-32-530 - Land acquisition

Commenter: Trumbo, Susan, representing Recyc Systems

"3. New landowner agreements shall be submitted to the department with each

application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids." Comment: As written new landowner agreements will be required for all sites 1) at time of permitting, 2) at reissuance of the permit, and 3) each permit modification. Recommendation: Recommend rewriting this section so new landowner agreements are required for the initial permit of the specific site and at reissuance.

DEQ Response to Comment: 3. New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids.

9VAC25-32-530.B.3

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-530.B.3 should be modified to mirror the language in the proposed VPDES regulations (9VAC25-31-485.B.3). It should read, "New or revised landowner agreements shall be submitted to the department if new land is being added to the permit or if there have been changes in the ownership of land included in a permit reissuance request."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language now in both sections reads, New landowner agreements, using the most current form provided by the board, shall be submitted to the department for proposed land application sites identified in each application for issuance or reissuance of a permit or the modification to add land to an existing permit that authorizes the land application of biosolids.

9VAC25-32-545

Commenter: Razik, Al, representing Maryland Environmental Services

This section requires some clarification. For example, when will the land appliers be allowed to stage material - after an equipment breakdown? What event triggers the need for staging biosolids? Also, some of the timing issues and length of staging need to be clarified as well.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-545 B 11 - "B. Staging requirements...11. No staging shall take place in areas of Karst topography; and..." - What is meant by area and how big an area? What is the definition of "Karst topography"?

DEQ Response to Comment: DCR defines Karst as a landscape developed in limestone, dolomite, marble or other soluble rocks and characterized by subsurface drainage systems, sinking or losing streams, sinkholes, springs and caves. At least 29 counties support Karst terrain in western Virginia, and smaller Karst areas also occur in the Cumberland Plateau, Piedmont and Coastal Plain provinces. This information is more appropriately included in guidance, as DEQ will consult with the DCR Natural Heritage program in the event that it is unclear whether a site proposed for permitting is located in an area of Karst terrain.

9VAC25-32-545 B 4 - "B. Staging requirements... 4. The certified land applier shall notify the department within 24-hours when it is necessary to stage biosolids for land application..." - We recommend to strike "certified land applier" and insert "permittee".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 B 9 - "B. Staging requirements... 9 Staged biosolids are to be inspected by the certified land applier at least every 7 days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order...Any ponding or malodor at the site is to be corrected..." - Any ponding correction should be limited to staging areas and not the entire farm.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 C 1 - "C. On-site storage...1. The certified land applier shall notify the department within the same working day whenever it is necessary to implement on-site storage..." - We recommend a change in notifications time to "within 24 hours". Thus this notification could be included in the daily notice to the Department.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 C 1 - "C. On-site storage...1. The certified land applier shall notify the department within the same working day whenever it is necessary to implement on-site storage..." - We recommend to strike "certified land applier" and replace with "permittee".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 C 8 - "8. Stored biosolids are to be inspected...Any ponding or malodor at the site is to be corrected..." - We recommend replacing "at the site" with "at the storage site".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 D - Routine Storage - The routine storage provisions limit the use of storage facilities to biosolids to be applied at a site included in permits held by the permit holder of the storage facility. We recommend that biosolids placed in routine storage be land applied on any permitted site. There are instances where two land appliers are operating in the same area; they may share a storage site. The regulations provide sufficient protections to ensure that routine storage sites are properly managed.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 D 1 c - "1. Location...c. All storage facilities located offsite of property owned by the generator shall be provided with a minimum 750-foot buffer zone..." We recommend adding the word "new" ("All new storage facilities..."). This is so we don't have to incur the challenges of moving existing approved pads and lagoons.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 D 3 b - "3. Construction...b. Storage facilities designed to hold dewatered biosolids shall be constructed with a cover to prevent contact with precipitation." - We recommend adding additional language at the end of this sentence. Storage facilities designed to hold dewatered biosolids shall be constructed with a cover to prevent contact with precipitation "or a department approved water management plan."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 D 5 c - "5. Operation...c. Storage facilities shall be operated in a manner such that sufficient freeboard is provided to ensure that the maximum anticipated high water elevation due to any and all design storm inputs is not less than one foot below the top berm elevation." - We recommend that the use of the word "should" over the word "shall" in regards to freeboard.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. No changes have been made. In order to ensure "no-discharge" operation, freeboard must be maintained at greater than 12" below the lowest point of the berm. In order to demonstrate compliance the freeboard of any lagoon or basin that is capable of containing liquids shall be measured at least daily using a staff gauge, the zero reading level with the lowest point in the berm. The freeboard shall be documented in a log and available for review during inspections or submitted monthly as requested by the regional staff..

9VAC25-32-545 D 5 f - "f. If malodors related to the stored biosolids are verified by DEQ at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours." - We recommend the malodor must be "addressed" within 48 hours. This provides for a second attempt if odors are not corrected by the first action.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This correction has been made

Commenter: Trumbo, Susan, representing Recyc Systems

"5. Staging shall be limited to the amount of biosolids specified in the nutrient management plan to be applied at the intended field." Comment: Some fields may not be suitable for staging of biosolids or other fields may be better suited. Allowing stockpiles in the more suitable fields would be preferable. Recommendation: Recommend changing "field" to "farm" or "fields at the farm".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-545 B 11

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-545 B 11 is vague. It is unclear what is meant by area and how Karst topography is defined.

DEQ Response to Comment: DCR defines Karst as a landscape developed in limestone, dolomite, marble or other soluble rocks and characterized by subsurface drainage systems, sinking or losing streams, sinkholes, springs and caves. At least 29 counties support Karst terrain in western Virginia, and smaller Karst areas also occur in the Cumberland Plateau, Piedmont and Coastal Plain provinces. This information is more appropriately included in

guidance, as DEQ will consult with the DCR Natural Heritage program in the event that it is unclear whether a site proposed for permitting is located in an area of Karst terrain.

9VAC25-32-545 B 4

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

In some instances, the regulation refers to the "certified land applier," when the reference should be to the "permittee". See, e.g., 9VAC25-32-545 B 4 & 9VAC25-32-550 C.

DEQ Response to Comment: DEQ acknowledge the review of the commenter. The term "certified land applier" has been replaced with "Permittee" or "Permit Holder" where appropriate.

9VAC25-32-550

Commenter: Trumbo, Susan, representing Recyc Systems

"5. All biosolids stored on the on-site storage pad shall be land applied by the 45th day from the first day of on-site storage;..." Comment: This requirement needs refinement. As written it would allow a onetime use for a 45 day period. Recommendation: Replace with "Biosolids stored on the on-site storage pad shall be removed within 45 days of its placement into storage."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

"a. The design capacity for storage of liquid biosolids shall be sufficient to store a minimum volume equivalent to 60 days or more average production of biosolids and the incidental wastewater generated by operation of the treatment works plus sufficient capacity." Comment: This is old language which needs to be updated. The requirement does not apply to contract land appliers. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

"a. The facility shall be located at an elevation that is not subject to, or is otherwise protected against, inundation produced by the 100-year flood/wave action as defined by U.S. Geological Survey or equivalent information." Comment: This is old language that needs to be updated. Recommendation: Change the 100 year flood/wave to the "frequent flooding".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, however a storage facility must be built in an area where risk of flooding is minimal.

"b. If alternative methods of management cannot be adequately verified, contractors should provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of sludge transported into Virginia from out-of-state treatment works generating at least Class II level treated sludge biosolids." Comment: This is old language and we question whether or not it is still necessary. This requirement is often overlooked because of its placement in storage rather than in permit requirements. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

"D. Routine storage." Comment/Recommendation: Recommend a total reworking of the routine storage section instead of patching the old language due to changes in practices which are not represented in the draft language.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

"Routine storage is the long-term storage of biosolids at a facility preapproved by the department and constructed specifically for the storage of biosolids to be applied at any site included in permits held by the permit holder of the storage facility." Comment: The requirement that land application sites be held by the permit holder of the storage facility will eliminate the use of subcontractors with a permitted land base. There is no justification for the requirement rather the greater land base held by multiple permit holders would be preferred to facilitate removal of the material from storage. Recommendation: Recommend "at permitted sites" and delete the rest of the sentence.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550 C

Commenter: Powell, Mary, representing Nutri-Blend

We do not agree with on-site storage unless the biosolids are covered. Long term storage that is uncovered will always lead to citizen complaints. The possibility for odor and runoff issues is much higher as the time left uncovered exceeds the 14 days allowed for staging. Allowing uncovered storage for up to 45 days will create continued controversy surrounding biosolids application.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550 D

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The routine storage provisions limit the use of storage facilities to biosolids to be applied at a site included in permits held by the permit holder of the storage facility (9VAC25-32-550 D). This limitation does not make sense. There are instances where two land applicers are operating in the same area; they may share a storage site. The regulations provide sufficient protections to ensure that routine storage sites are properly managed. There is no reason for limiting use of the storage facility to the storage permit holder only. In fact, this could lead to the need for more storage sites.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550 D 1 c

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-550 D 1 c should be amended to allow the Board to approve reduced buffers for storage facilities based on a site-by-site evaluation. There should not be a limitation on the amount by which the buffers may be reduced. This change would make the regulation consistent with current practice, in which the Board determines appropriate changes to buffer requirements on a site-specific basis.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550 D 3

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The section discussing storage facilities should make clear that the facilities must be designed to prevent contact with precipitation or as required in an approved water management plan (9VAC25-32-550 D 3).

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550 D 5 f. Storage Facilities

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The terminology in 9VAC25-32-550 D 5 f relating to malodor should change "corrected" to "addressed".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

Commenter: Razik, Al, representing Maryland Environmental Services

The proposed language states "If malodors related to the stored biosolids are verified by DEQ at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours". What criteria will DEQ use to verify when nuisance odors are a problem? It's well known that solving odor problems is very subjective science. MES commends DEQ for their progressive approach to the storage regulations to include covers, truck washing, supernatant management, and other good management practices.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550. Storage facilities.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-550 D 1 c to read: "c. All storage facilities with a capacity in excess of 100 wet tons and located offsite of property owned by the generator shall be provided a minimum 750-foot buffer zone..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

Revise 9VAC25-32-550 D to read: "D. Routine storage. Routine storage is the long-term storage of biosolids at a facility preapproved by the department and constructed specifically for the storage of biosolids to be applied to any site included in permits held by the permit holder of the storage facility. Routine storage does not include storage of biosolids on site of a wastewater treatment facility. Routing storage facilities shall be provided for all land application projects if no alternative means of management is available during nonapplication periods. No person shall apply to the department for a permit, a variance, or a permit modification authorizing routine storage of biosolids without first complying with all requirements adopted pursuant to § 62.1-44.19:3 A 5 R of the Code of Virginia. Plans and

specifications for any surface routine storage facilities (pits, ponds, lagoons) or aboveground facilities (tanks, pads) shall be submitted as part of the minimum information requirements..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550.C.1

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-550.C.1 should be modified to be consistent with the staging requirements of 9VAC25-32-545.B.4. The department should be notified within 24 hours instead of "within the same working day". There is no definition of the term "working day".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550.D

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

Language needs to be added to 9VAC25-32-550.D to clarify that the routine storage facility requirements do not apply to storage located within the boundaries of a wastewater treatment facility: D. Routine Storage. Routine storage is the long-term storage of biosolids at a facility preapproved by the department and constructed specifically for the storage of biosolids to be applied at any site included in permits held by the permit holder of the storage facility. Routine storage does not include storage of biosolids on the site of a wastewater treatment facility. Routine storage facilities shall be provided for all land application projects if no alternative means of management is available during nonapplication periods. No person shall apply to the department for a permit, a variance, or a permit modification authorizing routine storage of biosolids without first complying with all requirements adopted pursuant to §62.1-44.19:3R of the Code of Virginia. Plans and specifications for any surface routine storage facilities (pits, ponds, lagoons) or aboveground facilities (tanks, pads) shall be submitted as part of the minimum information requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-550.D.2.b

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-550.D.2.b includes the term "Class II" which is not defined. It is recommended that this term be replaced with "Class B".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage

9VAC25-32-560

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

Although DEQ has the overall responsibility for regulating the state's biosolids generators and land appliers, the Department of Conservation and Recreation (DCR) also has an important role to play. By statute, DCR is charged with developing a voluntary training and certification program for nutrient management planners, establishing regulations that provide the criteria for agricultural NMPs, reviewing NMPs prior to permit issuance in certain circumstances, and assisting DEQ in the adoption of its regulations. Despite the clear statutory delineation between

DEQ and DCRs responsibilities, the proposed regulations include language that would effectively revise DCR's Standards and Criteria (S&C). Procedurally, HRSD objects to revising DCR's regulations as a part of this regulatory process. More importantly, substantively, HRSD objects to the changes proposed in the regulations with regard to soil phosphorus, pH, and potassium levels. HRSD requests that the Board strike this language as inappropriate and unreasonable. HRSD's suggested edits to 9VAC25-32-560 include: (1) Deletion of proposed language located at A.1.e and (2) deletion of proposed language located at B.2.d & e. The proposed biosolids regulations would, in effect, re-write the existing DCR S&C. This is inappropriate. The Board should not permit DCR to shoehorn its criteria into the biosolids regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. (1) § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved. This language does not prohibit application, only requires plan approval (2) The language has been revised to say d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.
e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust

One of the most intensive discussions at the TAC was whether current land management measures (more specifically, buffers from occupied dwellings) provide adequate protection for the state's citizens who live on properties near land application sites. After much discussion, the TAC agreed that the size of the buffer could be extended up to an additional 200 feet (original buffer of 200 feet) by DEQ based on documented site-specific conditions. This was not to be an automatic extension, but rather a considered decision by DEQ based on information presented by the occupant of a dwelling on adjacent property. The extension should not automatically increase the buffer to 400 feet, but rather only by the amount necessary to address the site-specific concern. The buffer could be extended beyond 400 feet if the regional health director evaluates and certifies that such an extension is necessary to prevent specific and immediate injury to the health of an individual making the request. The proposed regulation captures the essence of the agreement, but additional details are necessary about the timing and circumstances in which such an extension would take place. DEQ has issued guidance related to extending buffers. That guidance goes too far, depicting the TAC's agreement as one that would result in an automatic extension of buffer areas from 200 feet to 400 feet whenever requested, regardless of the reason. The agreement reached in the TAC was not so broad. Moreover, the guidance does not prescribe a time frame in which such requests may be made. This could result in DEQ receiving a request, granting the buffer extension and notifying the land applier on the day of land application.

DEQ Response to Comment: DEQ has reviewed the TAC discussion referenced in the comment. During this discussion, the concern was raised about the time required for DEQ to evaluate the request and make a decision regarding an extended buffer. DEQ asserted that the

agency is not equipped to make a medical determination. An industry representative suggested that buffers be extended site by site rather than automatically give everyone 400 feet. Another TAC member, in an attempt to clarify, asked if the suggestion was DEQ could extend the buffer upon request with no further evaluation. The industry representative offered the example that a resident could call DEQ and assert that they wanted a 400 rather than 200 ft setback simply to reduce smelling the material. If DEQ were to grant the 400 feet only to the resident that wants it, rather than everyone; it takes the burden off of the land applier to go to the residents to get waivers to reduce the buffers from 400. DEQ staff, wishing to clarify, asked if that meant no justification from DEQ to the permittee was necessary for setback extension. There was general agreement among the TAC members, though no vote was taken. This was the basis of DEQ's buffer guidance and the proposed buffer language. Please refer to the response to comments regarding buffers and health for details regarding timing of buffer extensions.

Replace the term "operations management plan" with the term "biosolids operation plan" for consistence and clarification of the requirements.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This term has been changed to biosolids management plan.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 requires a soil test potassium level of greater than or equal to 38 ppm Mehlich I at the time of each biosolids application, based on soil test results to date both pre and post biosolids application. This section should be deleted; the NMP is the appropriate place to address how and when any deficient essential nutrient should be applied.

DEQ Response to Comment: The language has been revised to say "When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized."

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

9VAC25-32-560 should be changed to read "shall not exceed the rates established for the intended crop listed in the nutrient management plan." This will cover the contractor if the farmer changes his crop selection on any fields after biosolids have been land applied.

DEQ Response to Comment: It is the responsibility of the contractor to work closely with the farmer and develop the NMP based on the farmer's plans for his field.

Section 9VAC25-32-560 includes the dates of application, but it seems to have the dates reversed - the dates should read 2/29 and 10/1. This entire section should be reviewed to make sure the dates are accurate.

DEQ Response to Comment: DEQ acknowledges the review of this commenter. This section that contained this language has been struck, because it must be included in the NMPs

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-560 - Because many soils in the Chesapeake Bay region contain very high

concentrations of phosphorus due to long-term application of manure, chicken litter and commercial fertilizer, Dr. Evanylo recommends applying sludges at rates to meet the phosphorus needs of the crops. If this is not a requirement of the nutrient management plans, the proposed regulations should be revised to make this a requirement of any permit. Virginia is under increasing pressure to reduce its phosphorus contribution to the Chesapeake Bay. Permitting application of excess phosphorus in the form of sludge is counter to that goal and may necessitate further expenditures by the Commonwealth and our towns to reduce their phosphorus loadings.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved.

9VAC25-32-560 B 3 e (3) - Slopes - should be revised to state "Biosolids should not be applied to slopes in excess of 7%."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Technical recommendations from soil conservation professionals and field experience of DEQ inspectors demonstrate that application of biosolids on slopes between 7 and 15% can be accomplished without negative environmental impact. The biosolids organic material is useful in establishing a stand of permanent vegetation on slopes to prevent erosion.

9VAC25-32-560 B 3 f - Buffer zones - Because the adequacy (i.e. protectiveness) of a buffer cannot be established with any certainty, application of sludge in areas of Karst geology and floodplains poses an unacceptable risk of contamination of surface and groundwater, both of which serve as drinking water sources. 9VAC25-560 should prohibit land application of biosolids on areas designated as floodplains, on Karst landscapes characterized by limestone outcroppings, sinkholes, solution channels, and caves and on slopes greater than 7%. Barring that, minimum buffers around all environmental features listed in Table 2 should at least equal the 35 foot buffer required by NRCS standards, regardless of the method of application.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Setbacks have been increased to address Karst. Please see the response to comments regarding Environmental Concerns which addresses water quality, Karst and setbacks.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-560 A 1 b - "b. All nutrient management plans shall account for all sources of nutrients to be applied to the site and include at a minimum the following information..." - We recommend to end the sentence after "...for all sources of nutrients to be applied to the site." Delete the rest & items (1) - (5). This information should be addressed by the nutrient management plan regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This requirement has been struck because it is required by the NMP.

9VAC25-32-560 A 1 e - "e. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for application sites where the soil test phosphorus levels exceed the values in Table 1 of this section." - We recommend

this entire section be deleted (chart and language). It does not allow for the phosphorus index to be an option. We prefer to have one set of regulations to follow regarding crop nutrient management. The standards in criteria for the Nutrient Management Regulations allow the planner to use a phosphorus index.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved. This language does not prohibit application, only requires plan approval

9VAC25-32-560 B 2 e - "e. Soil test potassium levels must be greater than or equal to 38 parts per million (Mehlich I analytical procedure or equivalent) at the time of each biosolids application." - The regulations are requiring a soil test potassium level \geq 38 ppm at the time of each biosolids application. Based on soil test results to date pre and post biosolids applications, we recommend that this be deleted. The Nutrient Management Plan should recommend any deficient essential nutrient to be applied by the farmer.

DEQ Response to Comment: The language has been corrected to say d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

9VAC25-32-560 B 3 a - "3. Management practices. A. Site specific application rates shall not exceed the rates established in the nutrient management plan not result in exceedance of the cumulative trace element loading rates specified in 9VAC25-32-356 Table 2..." - We recommend that this read "Site specific application rates shall not exceed the rates established of the intended crop listed in the nutrient management plan". This will cover the contractor if the farmer changes his crop selection on any field with land applied biosolids.

DEQ Response to Comment: It is the responsibility of the contractor to work closely with the farmer and develop the NMP based on the farmer's plans for his field.

9VAC25-32-560 B 3 c - "c. Crops. For proposed use of crops or PAN rates (lbs/A) not stipulated in regulations..." - We recommend clarification as to whether the requirements of section 9VAC25-32 allow for a new crop that is not identified in the standards or criteria of the Nutrient Management Regulations. If not, we recommend any new crop fertilizer rate be set by research.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

9VAC25-32-560 B 3 c (1) - "(1) Infrequent. If biosolids are applied to a field only once in a 3-year period, biosolids may be applied such that the total crop needs for nitrogen is not exceeded...The infrequent application rate may be restricted..including existing residuals." -

We recommend that at the end of the sentence add "For systems designed for infrequent application - surface and groundwater monitoring shall not be required."

DEQ Response to Comment: DEQ acknowledges the review of the commenter, no change has been made. DEQ has the authority to request additional monitoring, including groundwater monitoring if deemed necessary.

9VAC25-32-560 B 3 c (1) - (3) - "c. Crops...(1) Soybeans...(2) Tallgrass Hay...(3) Warm season grasses and alfalfa..." - Soybeans, Tallgrass hay, warm season grasses and alfalfa needs to be removed so that we have one set of regulations to follow regarding crop nutrient management.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

9VAC25-32-560 B 3 g - Table 2 - Minimum buffer zone requirements - The chart is confusing. We recommend a different type of chart. We also recommend that streams or tributary buffers labeled PWS under the WQS be deleted. How do you find out if the stream or tributary is PWS under the WQS? We would also like to recommend that limestone rock outcrop buffers be deleted as no data supports this type of buffer is more beneficial than the rock outcrop buffer that is already in place.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers. PWS's are designated in the Water Quality Standards 9VAC25-260. Limestone rock outcrops are associated with Karst formations and therefore warrant a larger setback.

9VAC25-32-560 D - Reclamation of disturbed land. - We recommend that DMME setting application rates, not DCR and the proposed deletions in this section be restored.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been revised to require the reclamation activity be described in the overall biosolids management plan. However, the NMP for management of the site following the reclamation activity must still be approved by DCR when land application rates exceed agronomic rates, as all land application must include a nutrient management plan, as required by § 62.1-44.19:3.C.8 of the Code of Virginia.

9VAC25-32-560 D 3 a - "3. Management practices. a. Application rates...The nutrient management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance." - We recommend that "The nutrient management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance" be removed because reclamation of disturbed land is not an activity for the purpose of crop production, thus agronomic rates would not adequately reclaim any disturbed site.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Because all land application requires a NMP as specified in § 62.1-44.19:3.C.8 of the Code of Virginia, and the DCR NMP Standards and Criteria do not specify appropriate rates above agronomic for purposes of reclamation, a NMP for this purpose would require DCR approval in order to be classified as an NMP as required in the Code of Virginia.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed buffer language does not adequately reflect the TAC's general consensus. The most debated issue at the TAC was whether current land management measures (more specifically, buffers from occupied dwellings) provide adequate protection for the state's citizens who live on properties near land application sites. Although the TAC reached a general consensus on an approach that would allow for automatic extension of buffers from 200 feet up to 400 feet upon request (but no further review by VDH), the proposed regulatory language does not properly capture the TAC's general consensus. For this reason, VAMWA requests that DEQ revise its proposal consistent with that consensus. VAMWA supports the TAC's general consensus with reservation. In a nutshell, although we are willing to agree with the up to 200 foot extension concept because it provides predictability for land appliers (i.e., DEQ will not be negotiating individual buffers on every land application site), VAMWA is unconvinced that there is any scientific basis for the buffer extension provision. In a 2007 white paper, VDH, although it acknowledged the lack of a structured program to collect data on alleged health impacts, concluded that: "Although much still needs to be learned about the content, bioavailability and fate of chemicals and pathogens in biosolids and their health effects, there does not seem to be strong evidence of serious health risks when biosolids are managed and monitored appropriately. Human health allegations associated with biosolids usually lack evidence of biological absorption, medically determined human health effects, and/or do not meet the biological plausibility test." There is no scientific justification for extending buffers to 400 feet based upon request.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

Commenter: Trumbo, Susan, representing Recyc Systems

"(1) Setback distances (Table 2 of this section)". Comment/Recommendation: Request that this section be written clearly and completely to avoid confusion and misinterpretation. If the Department is going to implement the extended buffer from Public Buildings it needs to be included in the Regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

"(1) Soybeans. Allowable PAN rates are equivalent to the PAN recommendation for corn stipulated in regulations..." Comment: Application of biosolids is done according to the DCR NMP. This requirement is redundant and serves no purpose. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

"(2) Tallgrass hay..." Comment: Application of biosolids is done according to the DCR NMP. This requirement is redundant and serves no purpose. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this

language has been struck.

"(2)(4) Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes." Comment/Recommendation: Recommend this section be written clearly and completely to avoid confusion and aid in its implementation. For example, the set back from Public Buildings should be included if the Department intends on implementing this policy.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

"(3) Slopes above 15%. Biosolids shall not be applied to site slopes exceeding 15%." Comment: Application of biosolids to steep slopes would be beneficial to restore the soils and encourage vegetative growth. With proper management this can be done without harm to the environment. Recommendation: Recommend application to slopes greater than 15% with extra setbacks and management practices as recommended by VaTech.

DEQ Response to Comment: Language has been added to allow application on slopes >15% in order to establish and maintain vegetation on a slope, in order to eliminate erosion. Specific BMPs would be required at such a site before the application on a slope >15% would be allowed.

"(3) Warm season grasses and alfalfa..." Comment: Application of biosolids is done according to the DCR NMP. This requirement is redundant and serves no purpose. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

"(4) Biosolids application timing and slope restrictions shall conform to criteria contained in regulations promulgated pursuant to § 10-1-104.2 of the Code of Virginia." Comment: Previous section requires a plan to be prepared according to § 10.1-104.s of the Code of Virginia. Thus it is redundant and serves no purpose. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Since specifications regarding timing and slope have been removed from the VPA regulation, this statement is added to clarify that restrictions still exist within the DCR regulations.

"b. All nutrient management plans shall account for all sources of nutrients to be applied to the site and include at a minimum the following information:..." Comment: Previous section requires a plan to be prepared according to 10.1-104.s of the Code of Virginia. Thus it is redundant and unnecessary to state the minimum information required in a plan. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The content of a NMP is defined in the DCR regulations. This description has been deleted.

"Biosolids may be applied to snow-covered ground if the snow cover does not exceed one inch and the snow and biosolids are immediately incorporated within 24 hours of application. If snow melts during biosolids application, incorporation is not necessary." Comment: As written

the requirement is not logical for implementation in the field as most fields are surface application, no till. Note that 1 inch of snow converts to less than 0.1 inches of moisture. Generally field operations are not stopped by less than 0.1 inches of rain. So why the equivalent snow fall causing field operations to cease? Recommendation: Recommend replacing the "and" for "or" to allow biosolids application on a light snowfall on land which will not be tilled.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. If land application is made to fields which will not be tilled, land application should be limited, and continued only under conditions where the snow is melting. No changes have been made.

"c. Crops. For proposed use of crops or plants available nitrogen (PAN) rates (lbs/A) not stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia, adequate yield and PAN data are to be submitted in accordance with 9VAC25-32-60 F."

Comment: We are confused as to how 9VAC25-32-60 F applies to this section and the lack of justification of DEQ establishing crop needs. Note that DCR is the regulating agency for establishing crop needs. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

"d. Within 30 days after land application at the site has commenced, the permit holder shall provide a copy of the nutrient management plan to the department, the farm operator of the site, the Department of Conservation and Recreation regional office, and the chief executive officer or designee for the local government, unless they request in writing not to receive the nutrient management plan." Comment: Please clarify whether the plan to be submitted is the plan written prior to application to obtain target application rates or the plan written after application showing the actual application. Permit requires the Department to receive a copy of the plan within ten days of application. The Department receives monthly report of activities. Thus the requirement for a copy of the plan to the Department would be duplication of information and unnecessary. To avoid confusion we believe it best to send the farmer one plan, the plan after application so they have actual data and not proposed applications. Recommendation: This section needs clarification as to the Department's intent with consideration of not requiring different forms with the same information.

DEQ Response to Comment: Please refer to the response to comments regarding Nutrient Management Plans

"e. Soil test potassium levels must be greater than or equal to 38 parts per million (Mehlich I analytical procedure or equivalent) at the time of each biosolids application." Comment: We object to a layer of requirements applied to biosolids which are not applied to any other nutrient source without any justification of need. One would expect that a certified plan writer is capable of writing a plan for sites with low soil phosphorus. We suggest that if there is a problem, DCR revise their program to address that need. Also note that this requirement does not allow for application of potash after the soil tests is taken but prior to land application of biosolids. Recommendation: Delete in its entirety.

DEQ Response to Comment: The language has been revised to say d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

"e. The nutrient management plan must be approved by the Department of Conservation and Recreation prior to land application for application sites where the soil test phosphorus levels exceed the values in Table 1 of this section. For purposes of approval, permittees should submit the nutrient management plan to the Department of Conservation and Recreation at least 30 days prior to the anticipated date of land application to ensure adequate time for the approval process." Comment: We object to a layer of requirements applied to biosolids which are not applied to any other nutrient source without any justification of need. One would expect that a certified plan writer is capable of writing a plan for sites with high soil phosphorus. If this is a problem DCR should use their own regulations to resolve the problem and not another agencies' regulations. Recommendation: Delete in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The regulations governing AFOs, poultry, etc, require that each application site have approved NMPs. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved. This language does not prohibit application, only requires plan approval

"Forestland (Silviculture). Silvicultural use includes application of biosolids to commercial timber and fiber production land, as well as federal and state forests." Comment: Why restrict application of biosolids to commercial timber and fiber production land and federal and state forests? This definition would not allow application to timber tracts held in conservation or private recreational use. Recommendation: Recommend striking the word "commercial".

DEQ Response to Comment: DEQ acknowledges the review of the commenter; "commercial" has been struck.

"h. Voluntary extensions of buffer distances. If a permit holder negotiates a voluntary agreement with a landowner or resident to extend buffer distances or to add other more restrictive criteria than required by the regulation, the permit holder shall document the agreement in writing and provide the agreement to the department..." Comment: We object to this requirement in its entirety. Voluntary buffer extensions as noted are unenforceable private agreements between the permit holder and another party. DEQ is not a party to these agreements and should not force themselves into a private agreement. Implementation of this requirement will have the effect of ceasing the steps taken by the permit holder to act proactively. Recommendation: Recommend this section be deleted in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

"Property lines, w/o the presence of an "occupied dwelling". Comment/Recommendation:

Request allowance for this property line buffer to be reduced or waived by written consent of the landowner. Request the allowance for buffer reduction or waiver as allowed for property lines and houses.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

"The infrequent application rate may be restricted (i) down to 10% of the maximum cumulative loading rate (9VAC25-32-356 Table 2) for cadmium and lead or (ii) to account for all sources of nutrients applied to the site, including existing residuals. Comment: may or shall?

DEQ Response to Comment: This would be evaluated on a case-by-case basis

(2)(4) Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes. Comment: This section remains general and needs refinement to add in its implementation by the Department of Permit Holders. Recommendation: Buffer may be extended up to an additional 200 feet by the department based upon documented site specific conditions raised by the occupant of the dwelling and identified during the permit application review process consistent with 9VAC25-32-560(B)(3)(f)(4). The buffer may be extended further by the department if the regional health director certifies that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual. Extended buffers do not run with the land and will be invalid for subsequent occupants of the dwelling. Should the Department receive a written request to extend the buffer beyond the 200 feet after the permit has been issued, such an extension will only be granted after notification to the applicator. Such extensions may require approval for additional storage time and other operational adjustments. In all circumstances, the buffer will not be extended more than an additional 200 feet unless the applicator consents to such extension. A request for an extended buffer must be received by the Department and communicated to the permit holder no later than twenty-four hours before land application commences on the site adjacent to the occupied dwelling. Extended buffers do not run with the land, and will be invalid for subsequent property owners or occupants.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-560 A 1 b

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 A 1 b should end after "for all sources of nutrient to be applied to the site." The remainder of this sentence and items 1-5 should be deleted because these items are already governed and addressed by DCR's nutrient management plan.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This requirement has been struck because it is required by the NMP.

9VAC25-32-560 A 1 e

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 A 1 e should also be deleted (chart and language). So long as the

phosphorus index is being used in accordance with DCR's NMP regulations (and approved by DCR), no additional requirements should be imposed.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved. This language does not prohibit application, only requires plan approval

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-32-560 A 1 e.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted and is requiring that NMPs for these sites be preapproved.

9VAC25-32-560 B (3) (g) fn3

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

9VAC25-32-560 B (3)(g) fn 3 must be amended to provide: "No sewage sludge applications may be made on sites where applications site-specific conditions do not ensure that the environment, health, safety and welfare are protected unless the permit authorizes DEQ to impose adequate reasonable buffers specified in the permit, and DEQ in fact extends the buffer or imposes other restrictions that ensure that health and the environment are protected."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Please see the response to comments regarding buffers.

9VAC25-32-560 B (3)(g) fn3 must be amended to provide: "Buffers may be extended by DEQ based on documented site specific conditions. If extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s). Where the board fails to impose sufficient requirements to provide such protection, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding Setback extensions related to health.

Other extended buffer provisions proposed by DEQ are simply permissive and fail to make clear that unless buffers are adequately extended, by Code no sewage sludge may be land-applied. For example, 9VAC25-32-560 B (3) (g) fn 3 which states that Buffers may be extended by DEQ based on documented site specific conditions would have to be worded as follows: "Fn3: No sludge applications can be made on sites where site-specific conditions do not ensure that the environment, health, safety and welfare are protected."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments

regarding buffers.

9VAC25-32-560 B (4)

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

9VAC25-32-560 B (4) must be amended to provide: "Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes. If extended buffers sufficient to ensure the protection of health and the environment are not imposed on any site, no sewage sludge may be land-applied on such site(s) even under issued permits."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-560 B 2 d and e

Commenter: Powell, Mary, representing Nutri-Blend

Section d requires that soil pH must be greater than 5.5 at the time that biosolids that are not lime stabilized are applied. Section e requires that soil potassium levels be greater than or equal to 38 ppm at the time of biosolids application. Nutrient and lime needs are addressed in the nutrient management plan. Farmers are good stewards of the land and are interested in achieving the best possible yield and so will follow nutrient recommendations. If a farmer opens up a new piece of farmland, he would need to apply large amounts of nutrients and lime before he could get biosolids. Since that land most likely does not have good organic matter or primary nutrients the potassium would go unused and it would be very difficult to build up the levels. In order to avoid this catch 22 situation, we propose that as an alternative, the farmer be asked to sign an agreement stating that he or she will apply lime if the pH is below 5.5 and/or apply potassium if the levels are below 38 ppm.

DEQ Response to Comment: The language has been changed to read d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

This approach was chosen in order to facilitate permittee control over compliance with nutrient management criteria. Such consideration for acknowledging what is readily under the control of the land applier was discussed during the TAC meetings.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Delete 9VAC25-32-560 B 2 d & e.

DEQ Response to Comment: The language has been changed to read d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended

agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

This approach was chosen in order to facilitate permittee control over compliance with nutrient management criteria. Such consideration for acknowledging what is readily under the control of the land applier was discussed during the TAC meetings.

DEQ Response to Comment: The language has been changed to read d. When soil test pH is less than 5.5 S.U. the land shall be supplemented with lime at the recommended agronomic rate prior to or during biosolids application if the biosolids to be land applied have not been alkaline stabilized.

e. When soil test potassium levels are less than 38 parts per million (Mehlich I analytical procedure or equivalent) the land shall be supplemented with potash at the recommended agronomic rate prior to or during biosolids application. This eliminates the time required for soil pH to adjust.

9VAC25-32-560 B 3 c

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 B 3 c - this section should be deleted from the proposed regulation. DCR governs nutrient management plans and dictates plant available nitrogen rates for various crops. Including it in DEQ's regulations as well is duplicative and unnecessary.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

9VAC25-32-560 B 3 c (1)

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 - biosolids utilization methods - B 3 c (1) - soybeans - tallgrass hay, warm season grasses and alfalfa needs to be removed so that there is one set of regulations to follow regarding crop nutrient management.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been struck.

9VAC25-32-560 B 3 e 5

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 B 3 e 5 - should include an "or" statement - "if the snow cover does not exceed one inch or if the snow melts during application."

DEQ Response to Comment: DEQ acknowledges the comment. If land application is made to land during snowfall and the field is not eligible for incorporation, application should be limited. No changes have been made.

9VAC25-32-560 B 3 e(1)

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 B 3 e(1) - last sentence should read "for systems designed for infrequent application - surface and groundwater monitoring shall not be required."

DEQ Response to Comment: This language has been removed, as the NMP will dictate application rates and frequency

9VAC25-32-560 B 3 f (1) - Table 2 footnote 3

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise Footnote 3 to read: "Buffer may be extended up to an additional 200 feet by the department based upon documented site specific conditions raised by the occupant of the dwelling and identified during the permit application review process consistent with 9VAC25-32-560 B 3 f (4). The buffer may be extended further by the department if the regional health director certifies that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual. Extended buffers do not run with the land, and will be invalid for subsequent occupants of the dwelling."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-560 B 3 f (1) - Table 2 footnote 4

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise Footnote 4 to read: "Should the Department receive a written request to extend the buffer beyond the 200 feet after the permit is issued, such an extension will only be granted after notification to the applicator. Such extensions may require approval for additional storage time and other operational adjustments. In all circumstances, the buffer will not be extended more than an additional 200 feet unless the applicator consents to such extension. A request for an extended buffer must be received by the Department and communicated to the permit holder no later than twenty-four hours before land application commences on the site adjacent to the occupied dwelling. Buffer may exceed 400 feet where an evaluation by the Virginia Department of Health determines that a buffer in excess of 400 feet is necessary to prevent specific and immediate injury to the health of an individual. Extended buffers do not run with the land, and will be invalid for subsequent property owners or occupants."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Please see the response to comments regarding buffers and setbacks

9VAC25-32-560 B 3 f (3)

Commenter: Powell, Mary, representing Nutri-Blend

This states that biosolids should not be applied to sites with slopes exceeding 15%. We suggest that the upper limit be increased to 20%. Slopes in this range are commonly farmed and without organic fertilizer are much more susceptible to runoff. The farmer will come back in the areas that are not applied with biosolids and apply commercial fertilizer to balance the productivity of the field. Since the goal in any fertilizer application is to reduce runoff, it is counterintuitive to preclude biosolids applications on slope of 20% or less.

DEQ Response to Comment: Language has been added to allow application on slopes >15% in order to establish and maintain vegetation on a slope, in order to eliminate erosion.

Specific BMPs would be required at such a site before the application on a slope >15% would be allowed.

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-560 B 3 f (3) to read: "(3) Waivers. Waivers from adjacent property residents and or landowners may only be used to reduce buffer distances from occupied dwellings and/or property lines with the presence of an occupied dwelling."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-560 B 3 f (4)

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-560 B 3 f (4) to read: "(4) Extended buffer setback distances. The department may increase buffer requirements based on site specific features, such as agricultural drainage features and site slopes, identified during the permit application review process. Any such buffer increase shall be incorporated into the permit at the time it is issued. For applications where surface applied..."

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Please see the response to comments regarding buffers and setbacks

9VAC25-32-560 B 3 g (1) and (4)

Commenter: Powell, Mary, representing Nutri-Blend

This section deals with buffer setback distances. We do not feel that buffer setbacks for houses and property lines should have the option of being extended. There is no scientific evidence to support that this will further protect human or environmental health. Concerned citizens will request an extension under the assumption that they are being somehow protected from something dangerous simply because the option exists. There is no evidence or reason to believe that they are in fact in any danger or that a buffer extension would protect them from this perceived danger. This regulation would do very real damage to the farmers who use biosolids. Doubling the buffer distance removes exponentially more land from biosolids application. The farmer will have to chose between removing these fields from the biosolids program or having his field receive a very uneven biosolids application. Any areas that do not receive biosolids will need some other type of fertilizer and balancing the nutrients can be very difficult. Again this could lead to more runoff and leaching. The buffer setbacks have worked for many years in Virginia. There has never been any issue with the distances as stated and they have been protective of human and environmental health. They should remain as is without the option for extension.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-560 B.1

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-560.B.1 includes the term "Class II" which is not defined. It is recommended that this term be replaced with "Class B".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this correction has been made.

9VAC25-32-560 D 3 a

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 D 3 a - should be changed to remove the following language: "The nutrient management plan shall be approved by the Department of Conservation and Recreation prior to permit issuance." Reclamation of disturbed land is not an activity for the purpose of crop production, thus agronomic rates would not adequately reclaim any disturbed site and do not apply in this context.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers and Reclamation of Mined and Disturbed Land.

9VAC25-32-560 e

Commenter: Powell, Mary, representing Nutri-Blend

This requires that a nutrient management plan be approved by the DCR if soil phosphorus levels exceed a certain level. The levels listed in Table 1 correspond to the levels that would require a nutrient management planner to use the P Index tool if he or she wanted to write a plan that called for a biosolids application. The P Index tool was developed by the DCR and is included in their handbooks. It takes into account best management practices and field characteristics as well as soil pH level. The DCR trains its planners to use this tool. Since the DCR certifies nutrient management planners, it is unclear why plans would need pre-approval in any case, but especially in the case of just one specific set of circumstances. Also, nutrient management plans are submitted to the DCR for each biosolids application so the opportunity for review already exists. This appears to be an attempt to halt biosolids application on fields that have higher phosphorus levels through administrative red tape and excessive time investments (30 days for the DCR to review a plan). If the DCR's goal is to phase out the P Index tool, their regulations should be changes to reflect this in a way that is inclusive of the other organic nutrient sources in the state.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. § 62.1-44.19:3.C.8 states that approved NMPs are required for sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. DEQ believes that using land application sites with high phosphorus concentrations increase the risk that state waters could be impacted

9VAC25-32-560 Table 2

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-560 - Table 2 - The Table is confusing. How do you find out if the stream or tributary is a public water supply under the water quality standards? This information could be identified by DEQ during its review of the application. Also, the provisions relating to limestone rock outcrop will severely restrict land application in the Valley Region.

DEQ Response to Comment: PWS's are designated in the Water Quality Standards
9VAC25-260

Commenter: Staudinger, Henry J., and Jo Overbey, representing Citizens

In Table 2 of 9VAC25-32-560 DEQ has set forth a number of minimum buffers. However, it does not appear that any buffers were established, much less documented, to ensure that health was protected. Nor has DEQ made any effort to determine and document the minimum buffers needed to protect health sensitive individuals.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The section regarding buffers (setbacks) has been rewritten. Please see the response to comments regarding buffers.

9VAC25-32-570

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

9VAC25-32-570: Class A or Exceptional Quality ("EQ") biosolids must meet strict pathogen and vector control requirements and, therefore, can be marketed and distributed for use by individual homeowners or by commercial properties through garden centers and similar venues. These high quality materials are beneficial, as they provide an alternative to traditional soil amendments and fertilizers at a reasonable cost. HRSD is concerned about two aspects of the proposed regulations which may have an adverse effect on the marketing of Class A material. HRSD requests that the Board consider the following changes to the proposed regulation: (1) delete the language that would require additional testing for organics (9VAC25-32-570(A)(6), including Table 1); and (2) revise the language requiring a nutrient management plan ("NMP") for certain Class A materials. First, the language at paragraph 6 and Table 1 is vague and should be deleted. Second, the proposed regulations would require anyone using bulk (versus bagged) EQ materials below 90% solids for an unblended material or 40% solids for a blended materials develop and follow a NMP. HRSD does not believe that the General Assembly intended to require a NMP for EQ materials. If the Board chooses to move forward despite the statutory language, HRSD submits that it would be more appropriate to only require a NMP for bulk EQ materials meant for agricultural use.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, please see the response to comments regarding Exceptional Quality Biosolids.

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

At the beginning of 9VAC25-32-570, the following should be added: "If the biosolids exceed the Pollutant Concentrations in 9VAC25-32-356 Table 3." This addition is necessary because the annual pollutant loading rates in Table 4 of 9VAC25-32-356 only apply if the biosolids exceed the Table 3 metal concentrations. The applicable requirements are spelled out in 9VAC25-32-356 A 4.

DEQ Response to Comment: This language is from 40CFR part 503

The section relating to distribution and marketing (9VAC25-32-570) requires that any inert material mixed with Class A/EQ biosolids must be approved on a case-by-case basis. The use of these materials must be evaluated through proper testing or research designed to assess the suitability of such use. It is unclear what "proper testing" and "research designed to assess the suitability" means. This should not apply to inert materials that are already commonly used for agricultural purposes, such as commercial chemical fertilizers.

DEQ Response to Comment: This would be considered during permit application

processing

Commenter: Hughes, Kristen, representing Chesapeake Bay Foundation

In the VPA Section 9VAC25-32-570, there is an exemption from NMP requirements for bulk application of biosolids of exceptional quality. What is the intent of excluding exceptional quality biosolids from NMP requirements when "the percent solids of a blended product derived from biosolids is equal to or greater than 40% based on moisture content and total solids and achieves a carbon to nitrogen ration of at least 25:1"?

DEQ Response to Comment: DEQ received comment that distribution and marketing was not land application, and that it should follow that no NMP should be required for EQ material. The proposed requirement stated that biosolids meeting EQ standards may be distributed and marketed under a VPA or VPDES permit, and that nutrient management plans must be developed unless the EQ material 1) is >90% solids (i.e. pelletized) or 2) is greater than 40% solids and has a C:N ratio greater than 25:1. The purpose of the second specification was to differentiate between an EQ cake biosolids that would be land applied essentially the same way as a Class B material, versus a blended product that would be distributed and marketed more like a commercial fertilizer or soil amendment product and likely used for non-agricultural purposes. DEQ received comment that some biosolids compost and soil blends used for landscaping purposes would not meet the 25:1 C:N ratio and thus be subject to NMP requirements.

In response to these concerns, DEQ modified the NMP exemption to include material that is not used for the purpose of fertilizing agricultural operations.

If bulk EQ biosolids are land applied as a cake, a NMP is required and the distribution and marketing permit may include additional restrictions.

Commenter: Lohr, Matthew J., representing VA Department of Agriculture and Consumer Services (VDACS)

With respect to the requirements in the regulation for the distribution and marketing of exceptional quality biosolids, for the proposed 9VAC25-32-570(A)(1) and 9VAC25-32-570(B)(1), we suggest deleting references to the section of the Virginia Fertilizer Law that authorizes the Board of Agriculture and Consumer Services and the Commissioner to promulgate regulations. Instead, we recommend the listing of specific references to particular sections of the Virginia Fertilizer Law that prescribe the requirements for (i) product registration, (ii) tonnage statements and inspection fees, and (iii) statistical reports. We also suggest adding to the proposed 9VAC25-32-570(D)(4) a reference to the section of the Virginia Fertilizer Law regarding labeling.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, these changes have been made.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-570 A - "A. Exceptional quality...Distribution or marketing of Class A biosolids that have been mixed with inert materials may be approved on a case-by-case basis. Use of such mixtures for agricultural purposes shall be evaluated through proper testing or research programs designed to assess the suitability of the material for such use..." - This

requires that any inert material mixed with Class A/EQ biosolids must be approved on a case-by-case basis. The use of these materials must be evaluated through proper testing or research designed to assess the suitability of such use. It is unclear what "proper testing" and "research designed to assess the suitability" means. This should not apply to inert materials that are already commonly used for agricultural purposes, such as commercial chemical fertilizers.

DEQ Response to Comment: This would be considered during permit application processing

9VAC25-32-570 A 6 - "6. Additional parameters such as the organic chemicals listed in Table 1 of this section may be required..." - This needs to be specific. What criteria are required for additional testing?

DEQ Response to Comment: Please refer to the response to comments regarding sampling and testing

9VAC25-32-570 D 3 - "3. The annual whole sludge application rate for the biosolids that does not cause any of the annual pollutant loading rates in Table 4 of 9VAC25-32-356 to be exceeded; and..." - At the beginning of this sentence the following words need to be added: "If the biosolids exceed the Pollutant Concentrations in 9VAC 25-32-356 Table 3...". This is because the annual pollutant loading rates in Table 4 of 9VAC25-32-356 only apply if the biosolids exceed the Table 3 metal concentrations. The applicable requirements are spelled out in 9VAC25-32-356 A 4.

DEQ Response to Comment: This language is from 40CFR part 503

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

The proposed regulations would harm the State's EQ Biosolids Program. Class A or Exceptional Quality (EQ) biosolids must meet strict pathogen and vector control requirements and, therefore, can be marketed and distributed for use by individual homeowners or by commercial properties through garden centers and similar venues. These high quality materials are beneficial, as they provide an alternative to traditional soil amendments and fertilizers at a reasonable cost. VAMWA supports the Commonwealth's existing Class A biosolids program. VAMWA is concerned that two aspects of the proposed regulations would dissuade POTWs from upgrading to Class A production. Therefore, VAMWA requests that DEQ consider the following change to the proposed regulation: delete the language that would require additional testing for organics (9VAC25-32-570 A 6), including Table 1. The language at paragraph 6 and Table 1 is vague and should be deleted. Paragraph 6 does not explain when additional testing for organics would be required, or who would mandate that it be performed. In addition, Table 1 includes no benchmarks for the listed parameters that would trigger additional management measures. The language in Table 1 makes it impossible to predict whether a particular batch of EQ materials would be acceptable. The Class A program cannot function without regulatory predictability.

DEQ Response to Comment: EQ biosolids, which meet the state and federal standard for distribution and marketing, are exempt from the management practices and access restrictions, therefore it is imperative that these products meet high standards. In most cases, pretreatment programs and other industrial restrictions will address toxics. However, it may be necessary to screen for certain toxics if facility specific issues have been identified. Further, in

the case where municipal solid waste is composted with biosolids (and not subject to pretreatment programs), screening for organic chemicals would align with the requirements specified in the solid waste regulations. The table has been removed from the regulations, as it was there only as example. Any actual organics testing would be based on any site-specific issues identified.

The proposed regulations would require that anyone using bulk (versus bagged) EQ materials below 90% solids for an unblended material or 40% solids for a blended material develop and follow a NMP. VAMWA opposes the 40% exemption because of concerns that several of its members may have blended products with a solids content slightly below the 40% level. In certain cases, an EQ product is finished outdoors. As a result, moisture content can vary slightly as a function of the weather (i.e., an EQ product that would otherwise have a solids content of 40% plus could have a slightly lower content when it is ready for distribution). VAMWA requests a slight reduction in the percent solids requirement for blended products to 32% to resolve this issue.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This language has been changes to exempt NMPs for pelletized EQ biosolids (i.e. > 90% solids) and a "blended product derived from biosolids that is used for a purpose other than land application at agricultural operations."

VAMWA requests that DEQ consider the following change to the proposed regulation: revise the language requiring a nutrient management plan (NMP) for certain Class A materials. The proposed regulation would require that anyone using bulk (versus bagged) EQ materials below 90% solids for an unblended material or 40% solids for a blended material develop and follow a NMP. Legally, VAMWA does not believe that the General Assembly intended to require a NMP for EQ materials. The Virginia Code makes a distinction between land application as opposed to distribution and marketing. NMPs are required for land application. Distribution and marketing are activities involved when a POTW or third-party distributes a Class A product, regardless of form. If DEQ imposes a NMP requirement despite this statutory distinction, VAMWA submits that it would be more appropriate to only require a NMP for bulk EQ materials meant for agricultural use. NMPs are frequently used for agricultural lands, but would be a foreign concept for individual homeowners or small commercial properties that use small quantities of bulk Class A biosolids for their lawns, gardens, etc. Requiring a NMP in these situations would be extraordinarily onerous and would stunt the demand for these products. Although VAMWA would support a complete exemption from NMP requirements for all EQ materials, the language should at least be revised to at least clarify that NMPs only apply to agricultural use.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This language has been changes to exempt NMPs for pelletized EQ biosolids (i.e. > 90% solids) and a "blended product derived from biosolids that is used for a purpose other than land application at agricultural operations."

9VAC25-32-570 A 6

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The regulations provide for testing of additional parameters for screening purposes (9VAC25-32-570 A 6), but it is unclear under what circumstances that would be imposed.

DEQ Response to Comment: Please refer to the response to comments regarding sampling and testing

9VAC25-32-570 B 2

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Revise 9VAC25-32-570 B 2 to read: "2. Bulk quantities of exceptional quality biosolids intended for use for agricultural purposes shall be land applied in accordance with a nutrient management plan prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to § 10.1-104.2 of the Code of Virginia. Bulk quantities of exceptional quality biosolids intended for any other purpose shall not require development of or application consistent with a nutrient management plan. except under the following conditions: a. The percent solids of the biosolids is equal to or greater than 90% based on moisture content and total solids, or B. The percent solids of a blended product derived from biosolids is equal to or greater than 40% based on moisture content and total solids and achieves a carbon to nitrogen ration of at least 25:1.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This language has been changes to exempt NMPs for pelletized EQ biosolids (i.e. > 90% solids) and a "blended product derived from biosolids that is used for a purpose other than land application at agricultural operations."

9VAC25-32-60

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

An item G should be added to 9VAC25-32-60 to ensure that the department is processing applications in a timely manner, preferably stating that all applications will be issued or denied within 180 days. Example language: "The Department has 60 days from the time it receives a permit to deem it complete or return a list of deficiencies. The Department shall notify the permittee in writing when the permit is deemed complete. The Department shall schedule the public informational meeting within 60 days of the permit being deemed complete."

DEQ Response to Comment: DEQ policy is to process a permit within 180 days. This is established by the requirement in the regulation to submit a permit application at least 180 days prior to expiration or expected date of commencing activity.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F - "Application for the authorization to land apply biosolids...The board may also waive any requirements of this subsection that is not of material concern for a specific permit..." - Would like the "board" changes to the "department". That way DEQ can waive materials in the application and notification that can be referenced in documents that they already have. This would alleviate over burdening the board that only meets four times per year.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ works on behalf of the board

9VAC25-32-60 F 1 e - "Methods of notification of local government and obtaining compliance with local government zoning and applicable ordinances." - Please clarify so that local ordinances cannot supersede the department regulations.

DEQ Response to Comment: DEQ acknowledges the concern of the commenter; however this requirement is based on § 62.1-44.19:3.R. of the Code of Virginia which specifies “Localities, as part of their zoning ordinances, may designate or reasonably restrict the storage of sewage sludge based on criteria directly related to the public health, safety, and welfare of its citizens and the environment. Notwithstanding any contrary provision of law, a locality may by ordinance require that a special exception or a special use permit be obtained to begin the storage of sewage sludge on any property in its jurisdiction, including any area that is zoned as an agricultural district or classification. Such ordinances shall not restrict the storage of sewage sludge on a farm as long as such sludge is being stored (i) solely for land application on that farm and (ii) for a period no longer than 45 days. No person shall apply to the State Health Commissioner or the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing such storage without first complying with all requirements adopted pursuant to this subsection. “

9VAC25-32-60 F 1 e - "Methods of notification of local government and obtaining compliance with local government zoning and applicable ordinances." - This is of concern as it talks about obtaining compliance with local government zoning and applicable ordinances.

DEQ Response to Comment: DEQ acknowledges the concern of the commenter; however this requirement is based on § 62.1-44.19:3.R. of the Code of Virginia which specifies “Localities, as part of their zoning ordinances, may designate or reasonably restrict the storage of sewage sludge based on criteria directly related to the public health, safety, and welfare of its citizens and the environment. Notwithstanding any contrary provision of law, a locality may by ordinance require that a special exception or a special use permit be obtained to begin the storage of sewage sludge on any property in its jurisdiction, including any area that is zoned as an agricultural district or classification. Such ordinances shall not restrict the storage of sewage sludge on a farm as long as such sludge is being stored (i) solely for land application on that farm and (ii) for a period no longer than 45 days. No person shall apply to the State Health Commissioner or the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing such storage without first complying with all requirements adopted pursuant to this subsection.

9VAC25-32-60 F 1 f - "A copy of a letter of approval of the nutrient management plan for the operation from the Department of Conservation and Recreation if required in F 3 c of this section." - We request section f be deleted in its entirety. Requiring a separate submittal and approval from a state agency for a nutrient management plan that will be outdated before any biosolids application occurs is an unnecessary step and a diversion of government resources to review things that will never happen. Nutrient Management Plan should be approved after a permit is issued to ensure accuracy.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This language is based on Statutory requirement § 62.1-44.19:3.C.8.

9VAC25-32-60 F 2 b (3) - "Location of the following field features within 0.25 miles of the site boundary (indicate on map) with the approximate distance..." - What is the benefit of .25 miles? The distance should be measured from edge of application area NOT property lines as suggested.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language is based on 40CFR part 503

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Vector attraction reduction - providing "...a description of any procedures employed at the time of use to reduce vector attraction properties..." is not appropriate in the permit application. The permittee may not know at the time of permit submittal which vector attraction reduction will be used for the land application operation. VAMWA requests that DEQ strike this requirement and mandate, instead, that this information be provided with the monthly activity reports or with information on the treatment process for solids management.

DEQ Response to Comment: This is based on the federal regulation. The land applier must be prepared to meet VAR in the field in an emergency situation where biosolids have been land applied and VAR was not met at the plant. They should know if the fields are eligible to be incorporated, and if they or the farmer has the needed equipment to incorporate the sewage sludge within 6 hours.

Commenter: Trumbo, Susan, representing Recyc Systems

"(1) Description and specifications on spreader vehicles." Comment: Numerous types, sizes and models of spreaders are used. Recommendation: Modify to allow for a general description of spreader equipment.

DEQ Response to Comment: An O&M manual is meant to be used by staff using the equipment. It needs to include information on all the different equipment that the staff will encounter. WWTPs often include the equipment instruction manual in the O&M or reference the document and its location so that it is available to staff for use

"(1) When applying for authorization to land apply a biosolids source not previously included in a VPDES or Virginia Pollution Abatement Permit, the biosolids shall be sampled and analyzed for PCBs. The sample results shall be submitted with the permit application or request to add the source." Comment: Object to the general requirement for testing for PCB regardless of the background information from the generator indicates it is warranted. Recommendation: Recommend PCB testing of new sources if the background information on the source indicates a need.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. DEQ believes that testing for PCBs once every 10 years is not unreasonable.

"(11) Whether either of the vector attraction reduction options of 9VAC25-32-685 B 9 or B 10 is met at the site and a description of any procedures employed at the time of use to reduce vector attraction properties in biosolids;..." Comment: This appears to be a carryover from previous regulations and is not applicable due to the multiple sources and multiple circumstances over the time of the permit. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: This is based on the federal regulation. The land applier must be prepared to meet VAR in the field in an emergency situation where biosolids have been land applied and VAR was not met at the plant. They should know if the fields are eligible to be incorporated, and if they or the farmer has the needed equipment to incorporate the sewage sludge within 6 hours.

"(14) If not all land application sites have been identified at the time of permit application, the applicant must submit a land application plan that, at a minimum:..."

Comment: This allowance is considerate of the applicant but not logical. If the applicant has sufficient information to meet the minimum for advance notice, etc., then they would have sufficient information to meet the permit requirements. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The Land Application Plan has been deleted from the proposed regulation. It was an administrative tool used in the VPDES regulation; however, the statute addresses requirements for adding land and makes the LAP language obsolete. This language was also removed from the VPDES regulation.

"(3) Mined land sites where land application is proposed at greater than agronomic rates."

Comment: Requiring a Nutrient Management Plan for mine land sites at application at greater than agronomic rates is not logical and cannot be implemented. Rates at greater than agronomic rates would not be an agronomic operation. Nutrient Management Plans only govern agronomic operations. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. After further review, the language has been revised to require the reclamation activity be approved within the biosolids management plan. However, the NMP for management of the site following the reclamation still must be preapproved by DCR, and the approval submitted with the permit application, as required by § 62.1-44.19:3.C.8 of the Code of Virginia.

"(4) Field reclamation of offloading (staging) areas." Comment: Object to the use of "field reclamation" which implies serious damage has been done. Recommendation: Replace with "Reestablishing of offloading (staging) areas".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been revised.

"(a) Biosolids analytical data from a minimum of three samples taken within four and one-half years prior to the date of the permit application. Samples must be representative of the biosolids and should be taken at least one month apart. Existing data may be used in lieu of sampling done solely for the purpose of this application." Comment: Object to the general requirement for multiple sampling over an extended period of time regardless of the circumstances or applicability. For example the sampling period would not be applicable or feasible to a one-time cleanout of a lagoon or an emergency operation. Recommendation: Allow for a one time composite sampling for unusual circumstances.

DEQ Response to Comment: This language is from the federal regulation 40CFR Part 503. This allows for samples from small facilities that sample only once/year

"3. A biosolids operations management plan shall be provided that includes the following minimum site specific information at the time of permit application." Comment: Definition of the Operations Management Plan conflicts with the definition given in 9VAC25-32-410. For ease of implementation suggest having only one section which defines what is in the management plan. Recommendation: Combine and refine the sections into one.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, section 60 has been edited so that it lists only what is required at the time of permit application.

"3. A biosolids operations management plan shall be provided that includes the following minimum site specific information at the time of permit application." Comment: The use of the term "biosolids operations management plan" and the term "Operations and Maintenance" are too similar causing confusion. Recommendation: Delete "operations" from the term. Replace with "Biosolids Management Plan".

DEQ Response to Comment: DEQ acknowledges the review of the commenter, the name has been changed to Biosolids Management Plan.

"3. A biosolids operations management plan shall be provided that includes the following minimum site specific information at the time of permit application." Comment: There is a significant volume of information required for submittal in this section. What is truly necessary versus required by habit? Recommendation: Recommend refining the information required in an operations management plan to only that which is necessary.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Much of what is required is based on EPA permit applications for the land application of biosolids. Other items have been added based on experience regarding the information needed to evaluate a permit application.

"a. Description of operation: A comprehensive, general description of the operation shall be provided, including biosolids source or sources; quantities; flow diagram illustrating treatment works biosolids flows and solids handling units;..." Comment: Requirement for information on biosolids sources is a repeat of the requirements found in previous section, Design Information. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been reworded

"b. Haul routes to be used from the biosolids generator to the storage unit and land application sites." Comment: Numerous routes to the various generators and sites. Recommendation: Modify to allow for a general description of haul routes rather than a specific haul route due to various generators and land application sites.

DEQ Response to Comment: This section of the permit application is one part of the Operations Management Plan, and modifications to the plans shall be submitted to DEQ for approval as part of the plan. Other parts of the plan include the O&M manual and the NMPs for each site. VPA requires the "means of transport or conveyance" and has the same language in 9VAC25-32-60.F.4. This information is particularly important to the citizens at the time of the informational meeting prior to permit issuance.

"b. Storage facilities. Plans and specifications for storage facilities of all biosolids to be handled, including routine and on-site storage, shall be submitted for the issuance of a certificate to construct and a certificate to operate in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790) and shall depict the following information:..." Comment: The requirement for a certificate to operate in accordance with the SCAT reg's appears to be a carryover from previous regulations and is not applicable to biosolids land

application. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: The Sewage Collection and Treatment Regulations are still in effect and are applicable to biosolids storage facilities. No changes were made.

"Biosolids transport. A. Description and specifications on the bed or the tank vehicle." Comment: Numerous types, sizes and models of trucks and trailers are used to transport biosolids. Recommendation: Modify to allow for a general description of transport vehicles rather than a specific description.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; a more general description will be required at the time of permit application.

"c. Procedures for biosolids offloading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning); field reclamation and emergency spill notification and cleanup measures." Comments: Object to the use of "field reclamation" which implies serious damage has been done. Recommendation: Replace with "Reestablishing of offloading (staging) areas".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Please see the response to comments regarding staging and storage.

"e. Methods for notification of local government and obtaining compliance with local government zoning and applicable ordinances." Comment: This appears to be a carryover from previous regulations and is not applicable to biosolids land application. Recommendation: Delete this section in its entirety.

DEQ Response to Comment: DEQ acknowledges the concern of the commenter; however this requirement is based on § 62.1-44.19:3.R. of the Code of Virginia which specifies Localities, as part of their zoning ordinances, may designate or reasonably restrict the storage of sewage sludge based on criteria directly related to the public health, safety, and welfare of its citizens and the environment. Notwithstanding any contrary provision of law, a locality may by ordinance require that a special exception or a special use permit be obtained to begin the storage of sewage sludge on any property in its jurisdiction, including any area that is zoned as an agricultural district or classification. Such ordinances shall not restrict the storage of sewage sludge on a farm as long as such sludge is being stored (i) solely for land application on that farm and (ii) for a period no longer than 45 days. No person shall apply to the State Health Commissioner or the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing such storage without first complying with all requirements adopted pursuant to this subsection.

"The information may be providing by referencing information previously submitted to the department." Comment: Thank you. This will prevent the unnecessary repetitive submittal of manuals and general information.

DEQ Response to Comment: DEQ acknowledges the support of the commenter. The DEQ regional offices have the ability to ask for additional information if needed to evaluate an application.

9VAC25-32-60 F 1 c (3) Application for a VPA permit

Commenter: Razik, Al, representing Maryland Environmental Services

MES agrees with DEQ that implementing odor control plans are a good idea, since odors are a major issue of concern at land application sites. We would go one step further, and suggest that there should also be a requirement in the odor control plans for both the generators and land applicators to have a system for recording and documenting odor complaints. An odor control plan to minimize odor complaints will be more robust when the complaint information is transmitted to the source (generator).

DEQ Response to Comment: DEQ acknowledges the review and support of the commenter.

9VAC25-32-60 F 1 c (7)

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-60 F 1 c (7) - General information required should include the exact location of sites proposed for an application, such that interested individuals can identify specific fields proposed for application.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Based on experience with permit applications submitted since the program was transferred to DEQ, it has been determined that several maps are required for accurate permitting. The topographic map depicts the lay of the land and features that will affect where the biosolids can be applied; the tax map is used to determine the boundaries of the property that is legally authorized to receive biosolids; the transport map is required so that it will be available for public review at the public informational meeting; the soils map is needed for DEQ staff to evaluate the field's suitability for land application.

9VAC25-32-60 F 1 d

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Written permission from the landowners or farmers is required by 9VAC25-32-60 F 1 d on a form approved by the Board and pertinent lease agreements as may be necessary for the operation of the "treatment works". This makes no sense in the context and appears to be an editorial or typographical error, or perhaps a poorly-executed cut and paste effort.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however no changes have been made. It would apply in a case where the permittee is further treating the sewage sludge or biosolids received and the treatment works is leased or on leased land.

9VAC25-32-60 F 1 e

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The language in 9VAC25-32-60 F 1 e requires that the applicant describe "methods for notification of local government and obtaining compliance with local government zoning and applicable ordinances." That language appears to have been carried over from regulations pertaining to the construction of treatment works and has no applicability to land application activities. It should be removed.

DEQ Response to Comment: DEQ acknowledges the review of the commenter; however this requirement is based on § 62.1-44.19:3.R. of the Code of Virginia which specifies Localities, as part of their zoning ordinances, may designate or reasonably restrict the storage of

sewage sludge based on criteria directly related to the public health, safety, and welfare of its citizens and the environment. Notwithstanding any contrary provision of law, a locality may by ordinance require that a special exception or a special use permit be obtained to begin the storage of sewage sludge on any property in its jurisdiction, including any area that is zoned as an agricultural district or classification. Such ordinances shall not restrict the storage of sewage sludge on a farm as long as such sludge is being stored (i) solely for land application on that farm and (ii) for a period no longer than 45 days. No person shall apply to the State Health Commissioner or the Department of Environmental Quality for a permit, a variance, or a permit modification authorizing such storage without first complying with all requirements adopted pursuant to this subsection.

The requirement is inserted to ensure that all local requirements, where applicable, have been met.

9VAC25-32-60 F 1 f

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

9VAC25-32-60 F 1 f requires a letter approval from DCR for the nutrient management plan during the application process. This requirement should be consistent with the provisions of VA Code § 62.1-44.19:3(C)(8). Note also that the cross-reference to subdivision 3 c in the proposed regulation is not correct. Also note that the letter approval and nutrient management plans should not be required at the time of permit application. Rather, they should be required to be submitted prior to land application occurring. Soil characteristics can change over time. The nutrient management plans and related approvals should be performed as close as possible to the time of land application to assure their accuracy.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This language is based on Statutory requirement § 62.1-44.19:3.C.8.

9VAC25-32-60 F 2 a

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-60 F 2 a - Biosolids characterization - Biosolids analytical data should be from samples taken within one (1) year of the permit application. Allowing analyses that may be 4 or more years old is excessive and may not be representative of the materials that will be applied.

DEQ Response to Comment: This language is from the federal regulation 40CFR Part 503. This allows for samples from small facilities that sample only once/year

9VAC25-32-60 F 2 a (1)

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F 2 a (1) - "When applying for authorization to land apply a biosolids source not previously included in a VPDES or Virginia Pollution Abatement Permit, the biosolids shall be sampled and analyzed for PCBs..." - Please clarify, PCB's analyzed by EPA method 1668 (Frequency?). Clarify requirement and we object to the Department imposing additional sampling for no reason.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been changed to use method approved by 40 CFR Part 136 or 40 CFR Part 503.

9VAC25-32-60 F 2 a (4)

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F 2 a (4) - "Samples shall be collected and analyzed in accordance with analytical methods specified in EPA-SW-846, Third Edition (1986) with Revision I..." The methods of analysis seem to contradict analytical requirements found in 9VAC25-31-490 B.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been changed to use method approved by 40 CFR Part 136 or 40 CFR Part 503.

9VAC25-32-60 F 2 a 4

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The proposed regulations require PCB analysis of biosolids using Method 1668. We have some concern about the regulation including a requirement to use a method that has not been promulgated under 40 CFR Part 136. Additionally, this method is one of the more expensive. It is unclear from the regulation the frequency with which samples would be required. (9VAC25-32-60 F 2 a 4)

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The language has been changed to use method approved by 40 CFR Part 136 or 40 CFR Part 503.

9VAC25-32-60 F 2 b (3)

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F 2 b (3) - "... (o) other unlined impoundments; (p) septic tanks and drain fields; and (q) injection wells." - The requirement to map septic tanks and drain fields should be deleted. The features of septic tanks and drain fields can be difficult to determine and be intrusive to adjoining landowners. Will the permit application be required to report deficiencies found during the mapping?

DEQ Response to Comment: These are features required for maps submitted for routine storage facilities only.

9VAC25-32-60 F 2 d

Commenter: Mitchell-Watson, Leslie, representing Friends of the North Fork of the Shenandoah River

9VAC25-32-60 F 2 d - Land application sites - topographic maps should depict flood plains, which should be used to determine where biosolids can be applied, rather than "frequently flooded areas".

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Flood Plains would be included in frequently flooded areas

9VAC25-32-60 F 2 d (1)

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F 2 d (1) - "DEQ control number, if previously assigned, identifying each land application field or site and the site's location;" - The unique control number per field results in significant implementation issues related to timing/use of number and computer software issues of such a number. Can the Department clarify how the number will be used, for example it is to establish a unique identifier for each site or each field? How long will it take to

receive? How will this affect field splits, applications to less than an entire field, change in contractors, change in fields size/boundary that result over time in normal farming operations, etc. What happens when several tax numbers covers more than one field? We recommend that the control numbers be received prior to permit issuance so that they can be included in site books for recordkeeping activities. Will the department be equipped to readily provide detailed maps should a field pass from one generator to another to one land applier to another? Also another item should be added that states that only one entity can hold a permit on a field at a time. We do not support the establishment of a control number that results in an inability to support agricultural operations over time or in an inefficient manner.

DEQ Response to Comment: New language has been proposed to allow the permittee to use the current field ID number in the permit application until a DEQ control ID has been assigned. A control number is assigned when the sites are placed in the GIS database at the time of permit application or request to add land. There overlap or duplication of sites will be recognized at that time.

9VAC25-32-60 F 2 d (3)

Commenter: Powell, Mary, representing Nutri-Blend

This requires a topographic map as part of permit submittal for land application of biosolids. We request that an aerial map be an acceptable alternative. Aerial maps often have a great amount of detail on them and clearly show field boundaries and other features. These are often easier for field personnel to use. All required features could be depicted on an aerial map as easily as on a topographic map.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The regulation requires both, they each are capable of revealing different features

9VAC25-32-60 F 2 d (3) (h) Application for a VPA permit

Commenter: Razik, Al, representing Maryland Environmental Services

The definition of gross acreage should be defined more clearly, and there should be some reference to usable acreage (the gross acreage minus the buffer zone areas). Our experience has shown that the differences between gross and usable acreages should be delineated so as to avoid confusion in the field during land application. Also, it's common practice for land appliers to flag fields to mark off the buffer zone areas. MES suggest that the field flagging procedure be incorporated in the regulations to make this a universal practice.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Gross acres will stay the same, useable acres will change as buffers change. The field flagging procedure was not incorporated into the regulation, as the mechanism to ensure setbacks are accurate could potentially be achieved in different ways. The means used by the land applier should be specified in the biosolids management plan, and this would become enforceable.

9VAC25-32-60 F 2 d 14

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

Section 9VAC25-32-60 F 2 d 14 does not make sense, especially given that the regulations require a new application to be submitted with new sites are proposed to be added to the application area. If such information is required, there should be a shorter review time when the application for the new sites is filed.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The

Land Application Plan has been deleted from the proposed regulation. It was an administrative tool used in the VPDES regulation; however, the statute addresses requirements for adding land and makes the LAP language obsolete. This language was also removed from the VPDES regulation.

9VAC25-32-60 F 3 b (3)

Commenter: Hayes, Timothy, representing Hunton & Williams, LLP

The reference to mined land reclamation should be struck from 9VAC25-32-60 F 3 b (3). During the reclamation phase at these sites, biosolids are applied for the purpose of restoring the soil. During the time between the start of reclamation and the return of the land to productive purposes, the site is not being used for growth of any particular crop. Thus a requirement to provide a nutrient management plan during the reclamation process at such sites does not make sense.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. After further review, the language has been revised to require the reclamation activity be approved within the biosolids management plan. However, the NMP for management of the site following the reclamation still must be preapproved by DCR, and the approval submitted with the permit application, as required by § 62.1-44.19:3.C.8 of the Code of Virginia.

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-60 F 3 b (3) - "mined land sites where land application is proposed at greater than agronomic rates." - We recommend that this be deleted. Reclamation at above agronomic rate should not be considered in context of an agronomic rate nutrient management plan.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. Because all land application requires a NMP as specified in § 62.1-44.19:3.C.8 of the Code of Virginia, and the DCR NMP Standards and Criteria do not specify appropriate rates above agronomic for purposes of reclamation, a NMP for this purpose would require DCR approval in order to be classified as an NMP as required in the Code of Virginia.

Commenter: Smedley, Scott, representing Virginia Biosolids Council

The reference to mined land reclamation should be struck from 9VAC25-32-60 F 3 b (3). During the reclamation phase at these sites, biosolids are applied for the purpose of restoring the soil. During the time between the start of reclamation and the return of the land to productive purposes, the site is not being used for growth of any particular crop. There is an intensive effort to restore nonproductive lands to valuable, healthy and productive properties in Virginia, and a nutrient management plan should not be required to restore these damaged and nonproductive lands. Biosolids are a reliable, efficient material to restore and reclaim land, and every effort should be made to encourage this activity.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. After further review, the language has been revised to require the reclamation activity be approved within the biosolids management plan. However, the NMP for management of the site following the reclamation still must be preapproved by DCR, and the approval submitted with the permit application, as required by § 62.1-44.19:3.C.8 of the Code of Virginia.

9VAC25-32-60 F.1(8)d

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires written permission of landowners and farmers on a form approved by the board and pertinent lease agreements as may be necessary for operation of the treatment works. Since the definition of treatment works specifically states that it does not include biosolids use on privately owned agricultural land, it would seem that written permission of the landowner is adequate.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. The term farmer has been removed

9VAC25-32-60 F.2.d

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

This section requires an excess of maps for a land application site permit application. Some of the requested materials are extensive and seem more appropriate for a nutrient management plan (NMP). For example, the application requires four maps - a topographic map, a tax map, a transport map, and a soil survey map. Since DEQ will be assigning a specific control number to the site, it is recommended that the requirement for a tax map be deleted. The requirement for a transport map is premature, especially for the VPA permit, as the applier may not know the source of the biosolids that will be applied on that particular site. It is recommended that the transport map requirement be deleted. It is recommended that the soil survey map be included in the NMP instead of the application.

DEQ Response to Comment: Based on experience with permit applications submitted since the program was transferred to DEQ, it has been determined that these maps are required for accurate permitting. The topographic map depicts the lay of the land and features that will affect where the biosolids can be applied; the tax map is used to determine the boundaries of the property that is legally authorized to receive biosolids; the transport map is required so that it will be available for public review at the public informational meeting; the soils map is needed for DEQ staff to evaluate the field's suitability for land application.

9VAC25-32-720 A

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

VAMWA objects to the title of 9VAC25-32-720, "Liability requirements." Instead, that section should be titled, "Financial responsibility requirements". Likewise, the term "liability coverage" in 9VAC25-32-720 A and B should be replaced with "financial responsibility". Additionally, 9VAC25-32-720 A requires financial assurance of "\$2 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs." VAMWA recommends deleting the phrase "at least" from this requirement so that the financial assurance requirement is "\$2 million per occurrence with an annual aggregate of \$2 million, exclusive of legal defense costs."

DEQ Response to Comment: Please see response to comments regarding Financial Assurance above

9VAC25-32-780

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

The proposed regulations include an entirely new article (Article 6) to address financial assurance. One of the suggestions made by the VAMWA representative on the subcommittee was to streamline the local government test using alternative regulatory language. HRSD

requests that the Board substitute this language for the proposed language in 9VAC25-32-820. HRSD opposes the proposed language and supports the alternative approach for two reasons. First, the proposed requirements in the regulations are onerous. Second, the proposed requirements are unnecessary. Although HRSD acknowledges that the statute requires evidence of financial responsibility, we are unaware that there has ever been a finding of liability against a Virginia local government or sanitary authority for a biosolids-related incident. Proposed alternative language: 9VAC25-32-820. Local government financial test. "A. A permit holder or applicant that satisfies the requirements of this section may demonstrate financial assurance using the local government financial test. B. The permit holder or applicant shall satisfy the provisions of this section, as applicable: 1. If the permit holder or applicant is a city, county, or town as defined by Va. Code § 15.2-102, an authority as defined by Va. Code § 15.2-5101, or a sanitary district as defined by Va. Code § 21-113; and 2. The permit holder or applicant has the legal authority pursuant to Va. Code § 15.2-5114, or Va. Code § 21-118(5) to set sewer rates for use of the sewerage system. C. The local government permit holder or applicant must submit to the department the following: 1. An original letter signed by the local government's chief financial officer stating that the permit holder or applicant meets the requirements of this section; or 2. A notarized statement from the utility director, executive director or manager of the utility, authority or district that the permit holder or applicant meets the requirements of this section."

DEQ Response to Comment: Please see response to comments regarding Financial Assurance above

9VAC25-32-790

Commenter: Barauskas III, Joseph P., representing Insurance Providers

Suggested modifications to Article 6 - 9VAC25-32-790: 1) Each Applicator shall obtain a Pollution Liability policy as well as a General Liability policy that covers all activities associated with the "Transport, Storage and Land Application" of biosolids; 2) The Applicator's policy Limit of Liability shall not be less than \$2 M per Occurrence and not less than \$2 M Annual Aggregate: The policy or policies purchased shall include: ISO Form CG 25 04 03 97; Designated Location(s) General Aggregate or, ISO Form CG 25 03 03 97; Designated Construction Project(s) General Aggregate or their equivalents on both the Pollution Liability and General Liability policies; 3) The Applicator shall ensure that the Pollution Policy include either by endorsement or the purchase of a specific policy, a Limit of Liability equal to or greater than the Limit of Liability already established by the Authority for the transportation of Biosolids material; 4) The Coverage shall be evidenced by the provision of an ACORD Certificate of Insurance; and 5) Each policy is to be issued by an insurer which is licensed to transact the business of insurance in the Commonwealth of Virginia, or eligible to provide insurance as an Excess & Surplus Lines company. The insuring/issuing company should have at minimum an AM Best rating of A- or better at the time of the issuance of the ACORD Certificate of Insurance.

DEQ Response to Comment: Please see response to comments regarding Financial Assurance above

9VAC25-32-790

Commenter: Barauskas III, Joseph P., representing Insurance Providers

Since one of the objectives of the proposed regulations is to require insurance for "The

Transport, Storage and Application of Biosolids" this may necessitate the placement of specific policies for the following reasons: I. The Commercial General Liability form developed by the insurance Services Office (ISO) and most commonly used carries an Absolute Pollution Exclusion II. Recent changes to the Commercial Automobile policy could also necessitate a separate policy or the endorsement of a pollution policy to include the risks associated with the transport of the biosolids material. It is important to note however, that applicators domiciled in Virginia have the benefit of an exclusive Virginia amendment to the policy allowing for the discharge if "sudden and accidental". Therefore, applicators from other states operating in Virginia may need to consider the addition of Pollution in Transit coverage. III. Nature of Insuring Company: Page 403 - Line 20 to 22: It is suggested that the specified lines be expanded to include requirements regarding the financial stability/quality of the insuring company; utilization of AM Best, Standard & Poor's or Moody rating; these ratings reflect the financial capacity and stability of the insuring company.

DEQ Response to Comment: : Please see response to comments regarding Financial Assurance above

9VAC25-32-80

Commenter: Richardson, Hunter, representing Synagro Central, LLC

9VAC25-32-80 H 4 - "Monitoring shall be conducted according to analytical methods promulgated pursuant to § 304(h) of the Clean Water Act (33 USC § 1251 et seq.) and listed in the Code of Federal Regulations at 40 CFR Part 136 (1995). Any other acceptable test procedure not listed in 40 CFR Part 136 (1995) shall be specified in the VPA permit." - The analytical methods in 40 CFR Part 503 should also be included in this paragraph. This would also make the regulation consistent with the Part 503 analytical methods listed in 9VAC25-31-490 B.

DEQ Response to Comment: DEQ acknowledges the review of the commenter, this language has been updated.

9VAC25-32-820

Commenter: Steidel, Robert C., representing Virginia Association of Municipal Wastewater Agencies, Inc.

Replace proposed regulatory language in 9VAC25-32-820 related to Local government financial test with the following: "A. A permit holder or applicant that satisfies the requirements of this section may demonstrate financial assurance using the local government financial test. B. The permit holder or applicant shall satisfy the provisions of this section, as applicable: 1. If the permit holder or applicant is a city, county, or town as defined by Va. Code § 15.2-102, an authority as defined by Va. Code § 15.2-5101, or a sanitary district as defined by Va. Code § 21-113; and 2. The permit holder or applicant has the legal authority pursuant to Va. Code § 15.2-2119, Va. Code § 15.2-5114, or Va. Code § 21-118(5) to set sewer rates for use of the sewerage system. C. The local government permit holder or applicant must submit to the department the following: 1. An original letter signed by the local government's chief financial officer stating that the permit holder or applicant meets the requirements of this section; or 2. A notarized statement from the utility director, executive director or manager of the utility, authority or district that the permit holder or applicant meets the requirements of this section."

DEQ Response to Comment: Please see response to comments regarding Financial

Assurance above

9VAC35-31-100 Q 10

Commenter: Bowen, Rhonda, representing Hampton Roads Sanitation District

These requirements do not match the requirements for a routine biosolids storage facility under 9VAC25-32-550.D. Since 9VAC25-31-100.Q.10 applies to biosolids storage facilities not located at the site of the wastewater treatment plant, it is recommended that this section be deleted and any offsite routine storage be permitted under the VPA regulations.

DEQ Response to Comment: DEQ acknowledges the review of the commenter. This section has been rewritten. See the response to comments regarding storage.